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Stewjo: a dynamic partnership in the cause of LOCAL GOVERNMENT. David Walker on two professors who are effectively challenging Thatcher's policies.

C.P. Snow's TWO CULTURES thesis has been a long time dying. Owen Chadwick examines the relationship between "the sciences" and "the humanities" and argues that their separation is an illusion (page 13)

POLITICAL SOAP: Michael Thomas examines the marketing of politics and politicians (page 14)

Britain's WORD MOUNTAIN: Peter Curwen looks at the publishing explosion and examines the risks of glut marketing (page 15)



"To speak of the woe that is in MARRIAGE": Dr George Holmes reviews Georges Duby's study of the origins of modern wedlock in medieval France (page 16)

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Development studies in crisis

Re-assessing William Morris

Richard Freeborn reviews Joseph Frank's *Dostoevsky: the years of ordeal*

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A non-U research policy

Should polytechnics and other non-university colleges conduct research? And if so, how much? These two questions, which go to the heart of one of the most significant unresolved questions about the future organization of higher education, have never been properly addressed, let alone answered. Although all the polytechnics and one or two of the colleges have grown into more substantial and more mature institutions than the new universities and the promoted colleges of advanced technology were 20 years ago, no serious attempt has been made to establish a coherent research policy for what is now almost half of our higher education system.

The only available replies to these two essential and now urgent questions are trivial, top-of-the-head comments. To the first question, "is it?" because even the most bigoted university conservative cannot fail to have noticed that some polytechnics are responsible for some research. To the second, "no one is encouraging the polytechnics and colleges to do more" because this is a simple and truthful description of the present state of affairs. Neither comment is at all satisfactory.

In the last year there have been signs that at last effective concern is being generated about this alarming black hole in higher education policy. Last year the Council for National Academic Awards reiterated its conviction that those who teach on its degrees should be associated with, if not actively engaged in, research. But its definition of research, which took in professional practice, design and consultancy as well as more conventional scholarly activity, was very broad.

At about the same time the National Advisory Body made its first attempt to register research in polytechnics and colleges as an item on its policy agenda. But it did little more than that. This year the NAB is to make a more determined effort to devise a research strategy for the non-university sector, in the brief breathing space it has allowed itself between its first and second planning exercises.

The reasons for this lack of progress are reasonably clear. First, the non-university sector is not funded sufficiently generously to allow anything approaching a general commitment to research to be built into institutional budgets. Last year's inter-sectoral cost comparison by the Department of Education and Science demonstrated this clearly. If universities with much more generous unit costs are finding it difficult to maintain a proper research floor, what hope do the polytechnics and colleges have of emulating them?

This presents the NAB with a serious dilemma. It can of course reserve a small sum, a few millions, from an already inadequate pool allocation and label it as a research fund. But the procedures for dividing up this sum among the institutions would almost certainly be complex, controversial and even divisive. At an administrative level it may simply be more trouble than it is worth. Of course, it can be argued that at a political level the effort could still be justified. A NAB research fund might be of greater symbolic than practical significance, but it would lay down a clear marker

that the polytechnics and colleges were in the research business - official. A second difficulty is that there are people in the NAB who are cool about the whole idea of the non-university sector seeking a higher research profile. They argue that low unit costs and a reputation for concentrating on teaching will provide the polytechnics and colleges with significant tactical advantages in any competition with the universities for dwindling students in the 1990s. They point out that continuing education and two-year courses are the areas in which development should be concentrated, not research. They emphasize that present political logic suggests that some universities may have had to scale down if not abandon their research commitment; so what sense would it make for polytechnics and colleges to try to get in on the research act at this stage.

'The effort to establish a sensible research policy for polytechnics and colleges must be intensified, not abandoned. This must be done above all to defend their present stake in research'

A third difficulty is that there is something in the ethos of the non-university sector that discourages too wholehearted a commitment to research. Fears of "academic drift" may have receded in recent years but commitment to the pragmatism even utilitarianism represented in the ideas associated with the "Education for Capability" movement remains strong. Both lead some people in polytechnics and colleges to case a leery eye at research.

A fourth difficulty is that the university pattern for research support, the only available model working in practice, is in full decay. The research system is crumbling. The University Grants Committee is playing around with ultimately disingenuous distinctions between "scholarship" (reading the new books in your subject) and "research" (writing them). It is particularly difficult for the NAB or any other body in the non-university sector to devise a coherent research policy when the universities' traditional research policy is collapsing into incoherence.

Yet despite these difficulties the effort to establish a sensible research policy for polytechnics and colleges must be intensified not abandoned. This must be done above all to defend their present stake in research which has grown up in an ad hoc and permissive way over the past 20 years and which now makes a not inconsiderable contribution to higher education's technology and in some of the more applied social studies. Nearly every university's reply to the UGC's questions in its "great debate" about the

differences between the two sectors relies on the terrible simplicity that universities are "research" and polytechnics "teaching" institutions. Today's dismissible ignorance about research in polytechnics could all too easily become tomorrow's enforceable orthodoxy that creates a rigid hierarchy that gravely inhibits the growth of research outside the universities.

Perhaps the NAB should adopt a three-stage strategy. The first should be to undertake or commission an accurate census of the research at present being conducted in polytechnics and colleges. Much of this information is already available in some form or other, but its collation would underline the contribution that is already being made by the non-university sector. This might modify the ignorance and prejudice that is rampant in universities, and provide a sophisticated data base for the subsequent debate in the polytechnics and colleges.

The second stage might be to publish a "green paper" that summarized this information and simply asked, rather than trying to answer, some basic questions - how should research be defined in institutions with a vocational rather than academic bias? Is there a minimum size for institutions that can sustain a decent research role? Should all teachers have an obligation to undertake research (or should this be limited to UGC-style "scholarship")? Should there be more readers and other research posts? And so on. Just to get such questions discussed sensibly would provide a good start to what is bound to be a long and complex debate.

The third stage should be to connect the polytechnics and colleges' particular debate about future research policy with the broader discussions about the organization of research in higher education as a whole. These discussions, reflected very much through the prism of the universities' particular preoccupations, have been in progress at least since the publication of the Morrison report on the dual support system two years ago; they have been taken up by the various research council strategy papers and are an important element in the UGC's "great debate." For its own sake the non-university sector cannot afford to be excluded from such discussions; and for the sake of a sensible organization of higher education's research effort its present and future contribution should not be ignored.

At this early stage it is perhaps premature to speculate about the conclusions that might be reached. But even so some points are worth emphasizing. First, the inevitable selectivity of research that must follow the collapse of the dual support system should not be used as a device to discriminate against good research just because it is not taking place in a university. Second, there is no necessary contradiction between believing that the polytechnics and colleges should have a stake in research and arguing for the defence of two-year courses and the development of continuing education. Third, a broad definition of research can be justified but clever word plays about scholarship research cannot.

The quiet humanities

The task for the humanities today is to translate private endorsement into political support. For both Sir Keith Joseph and Sir Peter Swinnerton-Dyer are individuals, probably find little difficulty accepting, in private and intellectually, the plea for the continuing relevance of the humanities made by Professor Owen Chadwick, president of the British Academy (page 12). They know almost as well as we do that the humanities have an enduring place in our intellectual culture and that a higher education system which did not make generous

provision for them would barely be worth the name. They also know that graduates need flexible and portable intellectual skills which the humanities are very able to provide.

But as Secretary of State for Education and Science and chairman of the University Grants Committee, they find it much more difficult to accept the case for the humanities, politically and in public. One reason is that they cannot show enthusiasm for the language, even the religion, of high culture, and the study of the classics of

the humanities are difficult to hear. The second is that the big institutional battles are on the side of natural science and technology. SERC, MRC, NERC, ABRC, ACARD - there is a formidable array of acronyms to intimidate the policy maker. The humanities in contrast have no supporting acronyms; only the British Academy itself. Perhaps a case can be made out in crude, terms of political manipulation for a humanities research council like the National Endowment for the Humanities in the United States.



Academics blamed for student failure to consult recommended books... THES April 4.

Hello. Good morning. Welcome to the Introduction to general principles and concepts course. Now, as usual on this course I find that I've completely failed to prepare enough lectures to fill up all nine weeks of the term so I'll spend the whole of this first hour waffling about the book list.

Let me start by passing the copies around: I'm afraid that we're going to be the just a few short because there are rather more of you than I expected but that just means the eight or nine will need to share or else pop along to the departmental office and see if there's anything they can do about it. There, although as they're all rather busy at the moment perhaps you could leave it until a more suitable time nearer the end of term.

Now if you'd be so good as to look at the first page of this list - Arabic One-Roman I - you'll see that I've headed the section Recommended Reading. A total of 29 books in all - but do - and let me stress that word "do" - do look to the left of each title and you'll see that there are a number of asterisks ranging from one to four. So that, for example, Hetherington and Densley's *General Introduction to General Principles and Key Concepts* is given four asterisks which means it is "strongly recommended" within this Recommended section, while Medley and Dabridge's *Basic Introduction to Key Principles and General Concepts* is rather less heavily recommended and receives just two. Incidentally, you'll see also that I've marked Parrott and Grunwell's *Critical Concepts and Basic Principles* as a two asterisk book, but perhaps you'd make a note in the margin that Chapter Four is of clearly six asterisk standard.

You'll find that quite a few of the books in this section are unlisted by one important criterion - namely, they'll be almost impossible to get hold of because they've been copied directly from my own undergraduate reading list and are therefore years out of date. What's more, in a few cases, I've made them particularly difficult to find in the library by reversing the names of the authors, or else slightly misquoting them. Is that OK? Fine. On we go then to Page 7 - Roman II.

This section as you'll see is marked Strongly Recommended Reading and contains a total of 36 major texts and readers - which are marked with a number of asterisks ranging from five to sixteen - so that, for example, while Bullock and Hodgson's *Regeneration of Other People's Ideas on the Subject* is given 15 asterisks to make it a "very strongly recommended" Strongly Recommended book.

Finally, turning to page 14, Roman III, where I've listed those books which are of absolutely central importance to the course. Now, do notice that in this section there is no distinction whatsoever made in terms of the actual strength of the recommendation. Each one of the listed books is marked with 22 asterisks to indicate that it is "most highly recommended" within this Very Strongly Recommended Indeed category. Again, as usual, I've largely failed miserably without checking the present availability in either the library or the university bookshop. Any questions? Just a small thing, sir.

Yes? Given the present problems of the library, sir. You mean the recent decision to cut buying to six books a month? Yes, sir. And the fourfold increase in the price of books since 1971, whereas the value of the student grant in real terms over that period has steadily decreased.

Yes, yes.

Is there any one book on the list you'd particularly recommend?

The Times Higher Education Supplement

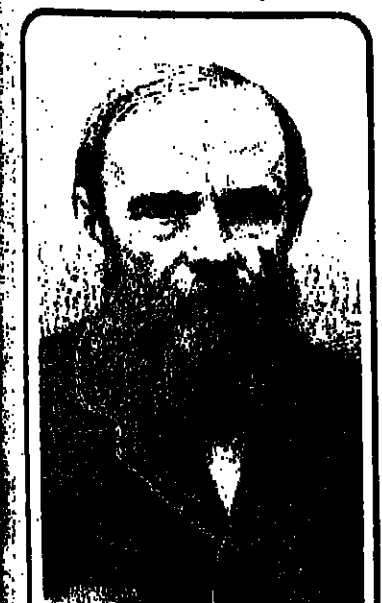
April 27, 1984 No 599 Price 60p

Whitehall rush to produce more engineers

by Jon Turney and Ngalo Crequer

Government and employers want higher education to produce more engineers - fast. And two interdepartmental efforts to do this in key technological areas are now under way. Both are geared to adjust the supply of engineers and technicians well ahead of the longer-term shift of resources from arts to science and technology sought by the Secretary of State for Education, Sir Keith Joseph. A working group set up by Mr Kenneth Baker, Minister for Information Technology at the Department of Trade and Industry, is to report by June on ways of boosting output of computer scientists and IT engineers. And a joint DTI/DES plan to produce 2,000 extra electrical and production engineers annually is now being costed for 1986/87.

The IT working group emerged from a meeting earlier this month between Sir Baker, industrialists concerned about recruiting qualified staff, and polytechnic directors and vice chancellors. The industrialists, led by Sir Austin Bide, chairman of Glaxo and of the Confederation of British Industry's research and technology committee, told the minister they were facing a drastic shortfall in supply of new graduates in expanding areas of information technology. For example, major electronics companies will be looking for 6,000 new engineers this



Dostoevsky's years of exile, 15

Census figures prompt revision of student demand

All projections for future student demand will need to be reduced because of revised estimates of population produced by the Office of Population, Censuses and Surveys, writes Ngalo Crequer.

As a result of the 1981 census, the office has revised all its figures for 1971 to 1980. The figures are also changed because of new definitions used by the OPCS.

According to the new estimates, all the projections on student demand overestimated the number of 18-year-olds likely to be in the system. Figures were not available this week, but the differences are said to be significant.

year, but there will only be just over 4,000 suitably qualified graduates coming into the market.

At the end of the meeting Mr Baker asked Mr John Butcher, undersecretary at the DTI, to chair a working group which would:

- quantify the gap between the number of graduates or diploma holders and industrial needs over the next three years;
- identify where the shortages lie, by subject and by industry;
- propose measures universities and polytechnics can take to overcome the shortages.

The group's full membership has not been finalized, but it will include officials from the DES and representatives from higher education. It will probably range wider than information technology, although this will be the main focus. A major concern will be the effect of the Government's earlier information technology package in higher education, and whether the system could respond quickly to a further injection of cash earmarked for new technology training - are there enough lecturers, for example.

The DTI's influence will also be felt when the new proposals for electrical and production engineers appear. They are the first fruit of detailed discussions following recent meetings between the Secretary of State for Trade and Industry, Mr Norman Tebbit, and his counterpart at the DES, Sir Keith Joseph, to discuss supply of engineers. The University Grants Committee has also been involved, and is ready to endorse a £25m allocation for conversion courses to retrain engineers who have chosen a less marketable speciality.

Both moves stem in part from pressure on the DTI from employers. Mr Baker's meeting on information technology followed declarations at last year's CBI meeting that the Government's ambitious Ayley programme for advanced computer research would founder for lack of qualified people. Mr John Ayley of British Telecom, chairman of the group which wrote the original proposals for the Ayley programme, attended the meeting, along with Mr David Baldwin of Hewlett-Packard, Mr Chris Curry of Acorn Computers, Sir Robert Telford of GEC-Marconi and Mr T. C. Rogers of Plessey. Mr Baker stressed that he was anxious for them to consider how they could improve their own contribution to training as well as seeking changes in graduate supply.

The plans for more electrical and production engineers are also in line with requests from industry, and with ideas put forward by the Engineering Council, which sees conversion courses as the best way of making the higher education system respond to employers' expressed needs faster.

It will certainly not overturn the conclusions last week of the Royal Statistical Society that higher education demand is likely to increase throughout the rest of this century.

The report, which is very critical of the way the DES arrived at its figures, for a 14-19 per cent drop, was warmly welcomed last week. Dr John Burnett, principal of Edinburgh University and vice chairman of the Committee of Vice Chancellors and Principals, said they were gratified by the report. "We were the first group to call attention to the unsatisfactory nature of the DES exercise, and to draw attention to the potential increase in



Colin Dodsworth as Slug (left) and Mervin Baskerville as Finney act out a story of despair to drug addiction in Tracks which one of the BP company awards in the Sunday Times National Students Drama Festival held at Bretton Hall College, Yorkshire. The two are part of a group of four students from the college. Drug addiction also formed the theme of another winning play *A Twist of Lemon* by Alex Renton of Exeter University.

NAB speeds up its policy debate

by John O'Leary

The National Advisory Body is likely to follow the University Grants Committee in speeding up its debate on long-term policy to make recommendations to the Government before Parliament's summer recess. Members of the NAB committee will have their first sight of the 150 responses next month, but they have already agreed to bring forward their timetable if the debate makes good progress. Instead of finalising the advice in September, they would hold a special meeting in July.

The board of the NAB had its first discussion on the responses before Easter and agreed ten chapter headings for the final report, which will be drafted before the end of the month. At the suggestion of representatives of the Department of Education and Science, the maintenance and monitoring of quality and the relationship between advanced and non-advanced further education were added to the original list of headings.

A summary of the proposed report will be presented to the chairman's study group on Tuesday, with the first debate on the full document taking place at the board meeting on May 22. As expected, the responses produced considerable opposition to the most controversial proposition in the consultative paper issued last year, for two-year degrees. There was some support for two-year ordinary degrees, but more enthusiasm for extending the range of existing diploma courses to accommodate applicants with only one A level.

There was also general agreement on the need for equal treatment of polytechnics and colleges with universities. The existence of the binary line was less contentious provided parity of treatment existed, but there was resistance to change in the NAB sector alone.

The need for flexibility in planning both at national and local level was also a common theme in the replies. Uncertainty over future levels of demand and Government assumptions about access led many to urge caution in framing recommendations.

Members of the NAB and the UGC are to hold further discussions on their parallel debates, having completed the two meetings initially arranged.

RULES claim standards bias

RULES, the educational pressure group, has claimed that the Committee of Vice Chancellors and Principals committee on academic standards is biased. RULES (Reform University Law and Educational Standards) has written to Professor Philip Reynolds, chairman of the committee, saying: "Of the 11 members of your committee, six at least may be seen as having an interest in that they are senior members of staff in universities which are known to have unresolved disputes concerning postgraduate examinations."

The Reynolds committee has just published a draft code of practice for external examiners. Other areas to be examined are the peer review system, professional accreditation of degree courses, university methods of postgraduate work, and the validation of public sector courses. According to RULES, there are 11 outstanding claims by students against London University, five against Leeds, two against Oxford, and one each against Sheffield and the Open University.

Professor Reynolds said in a reply to the group: "For whom do you speak? What is the 'experience' on the basis of which you make observations? Who are your 'members'? By what procedure have they authorized you to write on their behalf?"

"The CVCP is not an executive body and has no authority over universities which are independent, autonomous corporations by Royal Charter. I do not accept the McCarthyist principle of guilt by association that membership of an institution where there is an alleged complaint bars that person from a working group concerned with academic standards."

RULES says it knows of nearly 50 cases where students are complaining of unfair treatment by universities.

OU 'ripe for radical changes'

by Maggie Richards
Radical changes are needed in the structure and activities of the Open University to counter its looming financial crisis, according to a consultative report presented to the OU senate.

The document, compiled by the university's long-term review group, foresees important new roles in collaboration with other higher education institutions, expansion of the continuing education programme and responding to new academic and vocational needs. Detailed proposals will be put to the June meeting of the senate.

Unless these changes occur, the report warns, reduced funding by the Department of Education and Science will result in poorer support services to students, affect the supply of courses and cut the number of student places available. To maintain its present programme the university needs to find an extra £13.5m over the next three years.

The report identifies three priority areas for the OU: preservation of its higher education programme; a need to become responsive to new academic and vocational demands; and a new emphasis on continuing education.

In the higher education field the report says it is paramount to retain the "open" character of the OU and its distance learning first degree programme but it also emphasises the very considerable scope for cooperation.

continued on page 3

DON'S DIARY

WEDNESDAY

I'm in early and dashing round making final arrangements. I'm having new photographs taken of the senior officers. Only the photographer and I have any enthusiasm for the task. Everyone else seems to dread the encounter, and to fear the worst outcome. "Let's have a big smile," the photographer keeps on saying, as though the only emotion that should be put on record is unalloyed joy. Can't we sometimes have a Karsh Churchill, or a Victorian hard stare? The anxiety is infectious. The senior secretarial staff refuse to be photographed, despite all blandishments and the example set by their elders. The photographer waves all our faces by running out of film.

MONDAY

My week begins with *The Sunday Times*. More than half of the back page is given over to a preview of the Cup final at Wembley, Liverpool against Everton, to be shown live on television at 9.25 that night. I am surprised, because this is the Singapore English-language *Sunday Times*, brought back for me to read by an academic just returned from a recruiting drive in the Far East. I make a note of the paper's address, in case our Singapore students do anything wild, and pass on to the Saturday's and Monday's English newspapers. Nothing much in them about ourselves; but nothing much about other places, either.

A media call in to talk about the 150th anniversary celebrations of our medical school - we have a press conference about the event arranged for Thursday. Shall we try to interest the media in four very large stone statues that once graced the entrance to the first medical school, disappeared around the middle of the last century, and are said to be buried in - a certain place not far away? Perhaps we could doze for them in the Summer Vac? I promise to speak to the Professor of Anglo-Saxon Civilization, who's into dowsing. In the afternoon I became worried: the number of people from the media who've said they'll come to the press conference is smaller than the platform party. I make several phone calls, and get three more acceptances. We're in surplus. One of them is the proprietor of a local-interest magazine, who says he's heard there's going to be a Nobel Prize-winner golf tournament during the anniversary celebrations in September. What a thought! We settle for a less extraordinary event, but still over 18 holes; he is coaxed into putting up a small trophy, and I am asked to organize it.

TUESDAY

I don't want all my colleagues to think that all I do is to meet people in the university refectory for lunch; so I meet a senior man from the local radio station in a restaurant conveniently next to where he works. He explains the difference between local radio - informal, nicely inquisitive but not inquisitorial - and national radio - formal, dainty, even, with sharp interviewers intent on securing definitive statements. He suggests that our staff would be perfectly safe in the hands of his young interviewers, with their user-friendly tape recorders slung over their straight shoulders, and their engaging questions. Or, he goes on, your staff could just as easily broadcast live. I go weak at the knees on behalf of the entire academic community, save a few.

After lunch, I'm given a quick tour of the radio station. Today they're not broadcasting again until three o'clock; as all their output is coming from studios elsewhere. Nevertheless, the place has the feel of a newspaper office in any Hollywood film. Lots of people are hard at work trying to satisfy an insatiable machine. Typewriters are being pounded. Tape recorders are being bent over, and off-cuts of tape lie writhing on the floor. (How did radio ever work without reel recorders?) One whole recording studio is being dismantled. (It looks to me) by two engineers. "I'll be ready by three o'clock, won't I?" my man asks, twice. I promise him I'll come back when they're actually broadcasting - and walk back to the university, wondering how serious he was when he said that if we had any scientific camp-followers, I was to be sure to bring them across.

THURSDAY

Begin the day determined to do some faculty work before the press conference at 11.30, but fail completely - journalists who are coming ring to ask where it's taking place; those who aren't ring to try to find out what they'll be missing by not coming. Everyone seems rushed, under-prepared. On the way to the press conference I suddenly realize I need. We're all assembling in a committee room, and I count the visitors. Only two defectors to other stories, which isn't bad.

We start, with the dean's warm welcome and introductory remarks. So, the ice is off the windows, but the young journalists are cold and refuse to fire. Oh, no. Then a senior paper gives the lead, and we move off briskly, with our team knocking back the questions as if they've done this kind of thing before. "In your press release you say one of the prizes coming will be 100 years old in July. Can we have her name and address, please?" All others seize their pens too, and it's obvious they've all worked out where the nearest phone is. The dean senses the danger; sees the newshy crowd gathering at her door that very night; and declines to release her name until we have her consent.

A refusal often offends, but not this one. It seems, and our team carries it but with honour to the buffet lunch interval, when, in our enthusiasm, we let slip the name of the place where the four statues are buried (we think). Still, it's a big area. When I get back to the office, I answer the ringing phone. It's one of the missing local evening papers. Can I tell them the name and address of the 100-year-old woman? They want to lead their story with it - and, without it, well... A good young 'un, I say to myself on the bus on the way home, will always beat a good old 'un.

FRIDAY

Begin the day even more determined to do some work for my faculty, and receive encouragement to do so from my faculty secretary, who's feeling neglected. After a quick read of the papers, settle in my dictating chair and start hacking at the backlog. The internal phone interrupts chirpily - post mortems on the press conference. Outside calls, put through by our operator, and with a quite different, insistent ring, demand a response; we've got something in one of the national dailies, and there's a flurry of interest in the afternoon, to one of our museums, to find out how they're getting on with their mere 100th anniversary, due in August. The deputy curator's been spending the week browsing through newspapers and magazines of 1884, to get material for a period collage. I wish I had a job like that. A really bright thought strikes me as I walk back (ideally): what they need is to find somebody who is 100 years old, to open up the celebrations. Thoughts of that brightness should always be suppressed, and I do so instantly.

Tony Rylance

The author is an assistant registrar at the University of Newcastle upon Tyne.

letters to the editor
City's brave, lonely pioneers

Sir, - A careful reading of the Inner London Education Authority report on the merger between the "Two Cities" (*THESE*, April 6) does not disclose any particularly blissful future, whether one reads on the lines or between them. The City University has said no to the IEA report as such; it has not, repeat not, rejected the desirability of change, wider access to higher education, and the development of a new and greater university institution for the City of London and its metropolis. There are other means of achieving these objectives than the lowest common denominator solution of straight mergers/mixes between like departments. There may be better ways of running the City University. There are still in the City University who rally to the thought that a chance has now been created to "design" a new post-Robbins university with an accent on quality for the professions,

the cost-effective realities of "information society", wider access and the demographic needs of the future. Such an exercise needs imagination, long-range thinking, acute political sensitivity and no mean powers of planning and persuasion. The exercise will have to look at alternative, even new structures: it is possible to think of a university in the middle of London that has broken away from the English pattern, and finds support and funding within the national system. At present we are doing our homework very quietly, and will continue to do so until we have found our new voice.

The City University's reaction to the IEA report is not "explained in terms of condescension and fear" as your anonymous leader writer would have it (who told him/her that?). We have taken a brave and lonely decision to step out of line so that we may pioneer an enlarged university formed on

academic and operational merits rather than from administrative convenience. P. K. M'PHERSON
Pro-Vice-Chancellor,
H. MURRAY
Deputy Dean, Business School
The City University.

Sir, - After reading your "Two Cities" leader I am prompted to re-examine the merger between *The Times* and *The Sun*. This "could produce an excellent" to be highly successful in its own terms but also might lead to a re-orientation of the binary structure of British newspapers. I hope that journalists of *The Times* will not miss a golden opportunity to secure its future in a "condescension and fear" because

Yours sincerely,
STEPHEN BARNETT
University of Bradford.

UGC questions

Sir, - The University Grants Committee's questions about funding, tenure and academic freedom were well designed to evoke predictable consensus responses which the Government could ignore. Like the miners, most of us want more money, absolute security of tenure and the freedom to pursue our own academic research and teaching regardless of the public interest.

Very few governments today, having allowed the universities to expand massively, are willing to protect all the traditional privileges enjoyed in the past by a small non-party politicalized group of academics whose services were sufficiently in demand and inexpensive as to make them virtually self-financing. Tenure for all academics is a fairly recently acquired privilege in this country and not typically granted to the majority of academics elsewhere. It inhibits responses to changing demands.

In my judgment, no government in this country will increase university resources without reducing academic freedom and tenure. Faced with the choices posed by the UGC's questions, perhaps only Oxford and Cambridge are sufficiently wealthy and successful to revert to private institutions like Harvard and Buckingham. The rest of us are too dependent on public subsidies to retain our freedom if forced to make a choice. Blurring the differences between universities and polytechnics, desirable though this may be in theory, will only make our position more vulnerable.

Clever questions demand considered replies. I hope the UGC has received some which do not follow the Scargill line of thinking.

Yours etc,
BRIAN HOLMES
Professor of Comparative Education,
4 Sandwell Mansions,
West End Lane,
London NW6.

BSA report

Sir, - In his piece about the British Sociological Association conference (*THESE*, April 13), Paul Flather accurately reported my call for a community service programme, and the response it had.

However, his report was headlined "Sociologists dismiss YTS as mopping up operation". Some speakers were dismissively critical of YTS, but it is not my view that, whatever its weaknesses, it should be dismissed, I think, and said - that it should be improved and strengthened, not least by incorporating community service into a two-year programme.

This is one headline I would prefer to opt out of, please.

Yours sincerely,
PROFESSOR DAVID MARSLAND
Brunel University.

Letters for publication should arrive by Tuesday morning. They should be as short as possible and written on one side of the paper. The editor reserves the right to edit, or amend them, if necessary.

Straw structures

Sir, - If Jack Straw wanted to find out about reliability theory, would he question a couple of students and "dons", read a book review in *The Observer*, and then conclude, since he couldn't understand it on the basis of these researchers, that it was nothing but "academic obscurantism" (*THESE*, April 13)? Why is English alone among disciplines supposed to be accessible to the commonest of common sense?

In answer to his challenge, structuralism is the belief that our experience of the world is an effect of structures which exist outside us and which we do not normally take into account when we appeal to our experience as the source and guarantee of our knowledge. People's native languages, which divide up the world in different ways, are in practice learned structures, though each is commonly experienced as a set of transparent labels for things which already exist in unproblematic relation to each other. Common sense itself is an effect of linguistic and ideological

Admin meeting

Sir, - Your report (*THESE*, April 13) on the annual meeting of university administrators at Liverpool makes pointed criticisms of the Conference of University Administrators which merit serious consideration. Yet I must, as a rank and file administrative officer, suggest that you may have misunderstood some of the essential features of the event (perhaps no one asked you to dance at the reception).

First of all, the emphasis on training is not accidental - the promotion of training in all its aspects has always been CUA's top priority. Indeed the debate over whether the various fragmentary training schemes now in operation should be unified and lead to a specific qualification for university administrators was one of the policy issues addressed by the meeting.

Second, the production of policy statements as such is a correspondingly more incidental activity for CUA. The report on projected student numbers (which you mention) and the subsequent major study of resource allocation procedures in universities (which you don't) - these are but two of many CUA publications - were in any case hardly a matter of policy, rather of research which could inform decision-making. At present administrators, along with non-academic staff, have no formal representation in policy-making within most universities.

In fact, of course, policy is discussed at CUA working-groups - though

Design P.S.

Sir, - I should like to add a postscript to the letter (*THESE*, April 13) from Professor Beveridge criticizing the article on computer-aided design by Professor T. W. Mayer. Professor Mayer clearly has even less experience of architectural practice than he has of architectural institutions, as his strictures on "agreed fees" and professional institutions are completely out of date as regards architecture in the case

structures, not a guarantee of work is historically and culturally relative. There are not many structures left. This is not because we've got back to the shaky convictions of common sense, but because we've got to analyse the contradictions and conflicts which occur within the structures which produce the world we seem to know.

If the thinking of the Labour Party (of which I am a member) were to be some account of the admittedly difficult theories of postmodernism, it might be able to analyse the state of Britain at the moment in ways which would more effectively contest to appeal to the electorate of Conservative common sense - precisely the proverbial wisdom which belongs historically and culturally to the common shop.

I should be happy to send Jack Straw a reading list which would at least help him find a more useful target for attack than higher education.

Yours faithfully,
CATHERINE BELSEY
Department of English,
University College, Cardiff.

STUC youth scheme warning

The Scottish TUC has warned that the youth training and community programme schemes are threatening permanent jobs, pay and conditions. Mr John MacFadden, of the National and Local Government Officers' Association, told the STUC's annual conference in Aberdeen last week that unions must be prepared to withdraw their support from the schemes if they are not brought up to standard.

The conference unanimously called for an education and training system for all 16 to 18-year-olds which did not discriminate between school leavers and those staying on in school. The STUC intends mounting a campaign against the withdrawal of benefits from young people who refuse to accept placement on YTS. Mr MacFadden said many careers officers were already refusing to give the Department of Health and Social Security information about youngsters who refused places or left the scheme.

The conference also unanimously continued from front page

with other higher education providers. It suggests collaboration with the University Grants Committee and the National Advisory Body on such matters as joint planning of part-time courses; sharing of academic and non-academic services; establishment of credit transfer systems and local collaboration in teaching.

While emphasising the need for the OU to maintain its broadly based degree programme the report does envisage a shift of emphasis towards mathematics, science and technology courses, reflecting national demands for more graduates in these areas. But it acknowledges that these courses are more costly, and any such change will require additional funding.

College offer gives a boost to AUT

by David Jobbins

The provisional 4.5 per cent deal for college lecturers has given a shot in the arm of the demand by university staff for an offer in excess of the cash limit.

Ms Diana Warwick, general secretary of the Association of University Teachers, said this week: "This confirms the going rate of 4.5 per cent, which is 1½ per cent more than the AUT has been offered."

Only the manual workers have had a hint of anything in excess of the 3 per cent assumed for salaries in the recurrent grant - and then only in informal terms.

A renewed round of negotiations begins next week, with the manual staff resuming talks and white collar staff beginning theirs. Committee A, the first stage in the academic's negotiating process, is scheduled for May 8.

Formal acceptance of the offer to college lecturers - 4 per cent for all with £330 for those on the top point of the lowest salary scale, will not come until a special council meeting on May 22.

But if there are serious reservations they will emerge at branch meetings which the union has instructed its members to hold as soon as they return from the Easter break. In any case, a clear picture should be gained from the regional council meetings over the weekend before the special council.

Nevertheless there are no signs that the university employers are prepared to follow the local authorities and step beyond 3 per cent for all but the manuals.

Scottish higher education lecturers are threatening to take disruptive action if management do not improve a 3 per cent pay offer.

Staff have been angered because the management side of the Scottish Joint Negotiating Committee have made an informal offer of 3 per cent to staff in central institutions and colleges of education, but have simultaneously offered 4.5 per cent to staff in local authority further education colleges. The SINCE is due to meet again next Friday.

Yours faithfully,
IAN PURVER
Administrative Officer,
University of Salford.

of the RIBA the mandatory fee scale was done away with two years ago and architects are now free to advertise, and a commercial situation exists with open competition in the matter of fees. Moreover, no one has to employ an architect - they could employ Professor Mayer, for example, if he can do the job better or for less.

Yours faithfully,
R. D. BRADBURY
183 Rodney Street,
Liverpool.

OU 'ripe for radical change'

continued from front page

adopted as an integral part of the OU report urges. Undergraduate and continuing education programmes should be planned jointly to utilize the university's resources as efficiently as possible. But there can still be a separate centre for continuing education to act as a focal point for external institutions, support academic development of credit transfer systems and local collaboration in teaching.

The importance of research to the academic standing of the OU is noted. In the present economic climate it is suggested higher degree courses should be taught on a self-financing basis only.

On broadcasting the report urges wider use of video material, though it acknowledges that at present video production is almost as costly as conventional broadcasting.

Research reforms rejected

by Jon Turney
Science Correspondent

The Government has rejected the sweeping reforms in organization of food and farming research proposed last year by a House of Commons Committee.

A report from the Commons Agriculture Committee criticized the complexity of current arrangements and said agriculture's research policy-makers should be united in a single, central authority.

The council, government departments and the civil service unions all opposed this recommendation, which the Government's response to the committee now rejects. The Ministry of Agriculture will also abolish the Joint Consultative Board, from whose papers many of the Agriculture Committee's recommendations were taken.

The JCO and the old Research Sponsors Group, which represented the Agriculture Ministry, the Scottish and Welsh Departments and the AFRC, will be replaced by a new

Priorities Board, to be chaired by Mr Kenneth Durham, chairman of Unilever.

The Government's response to the committee report, now released, says a new central authority for agriculture and food research and development would undermine key advantages of the present system. The Government argues that such an independent body would mean the agriculture ministry no longer controlled research it paid for as a customer, current arrangements between research institutes and the Scottish agriculture departments would be disrupted and the AFRC would lose its place in the research council system.

The new priorities board will "coordinate publicly-funded agriculture and food research into a coherent publicly-funded agriculture and food research into a coherent programme relating to defined objectives". The Government says the group will be advisory but it expects the advice given will normally be accepted.

The AFRC indicated it would look to the new board for advice on research priorities at the applied end of the spectrum, and expected to liaise with the board in much the same way it now deals with the Advisory Board for the Research Councils. It will still look to the AFRC for guidance on priorities in basic research.

Mr Oscar Colburn, chairman of the Joint Consultative Organization's board said he was disappointed with the response, and other board members echoed his view. However, JCO members felt that other recent changes, especially moves to increase food research in the AFRC, owed something to their efforts.

Mr Tom Torney MP, acting chairman of the Commons Agriculture Committee said the MPs would respond to the Government's response soon. However, he thought it was a pity the changes in AFRC would lead to closure of institutes. "While I welcome the fact that food has been incorporated in the AFRC's name, we never suggested in our report that the agriculture side of the industry should be depleted of research funds because of this," he said.

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Professor Bowey argued that universities would raise their standards by taking in more women. Nobody had ever shown that women had weaker brains or intellect than men.

"If a higher proportion of men is coming in, that means you are taking students of lower calibre than you should be." Only 10 per cent of all academic staff were female, Professor Bowey added, and at professional level this fell to 3 per cent. "A lot of good women are not holding jobs which are being held by not very good men," she said.

Strathclyde's principal, Dr Graham Hills, said reliance on indirect action seemed a very slow way of achieving change, and asked what positive discrimination was possible.

Positive discrimination was illegal except in training courses in areas where there were few women, said Professor Bowey. But if a post had been held by men over the previous 12 months, an advertisement could state that women were encouraged to apply.

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Professor slams inequality

by Olga Wojtas
Scottish Correspondent

It is foolish to try to pretend that universities do not discriminate against women, according to Angela Bowey, Strathclyde University's only female professor.

Professor Bowey, director of Strathclyde's pay and reward research centre and Scottish commissioner of the Equal Opportunities Commission, was giving a town and gown seminar on opportunities for women in the university world.

Universities provided higher education for a far greater proportion of men than women, and also gave men more valuable education in terms of helping their future employment prospects. In engineering courses, where job prospects were good, there were 28,000 male students and only 2,000 female students, while in language and literature courses, where there was a high probability of unemployment, there were 10,000 male students and 21,000 female.

Professor Bowey said it was wrong to push all the blame for this on to schools, parents and girls themselves. The universities must do more to make girls feel welcome, and should try to influence schools and guidance teachers to encourage girls.

She praised Strathclyde's "insight into engineering" programme, an annual residential course for schoolgirls "to let them know what engineering is about and let them make up their minds on the basis of knowledge rather than prejudice."

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This is the last of individual reports on how institutions have replied to the University Grants Committee "great debate". Next week we analyse in depth what the universities have said.

'Go public' Leeds tells UGC

by Ngaio Crequer

Leeds University, whose vice-chancellor, Sir Edward Parkes, is a former chairman of the University Grants Committee, suggests two important changes in the committee's role.

"First, we believe that the committee's advice to Government should be made public. Secondly, we favour an increased openness of communication between the UGC and the universities."

Leeds would welcome formal written "feedback" after visits by the committee and subcommittees. It values the role played by the committee, endorsing the present arrangement whereby members serve in their individual capacity, but would like more non-professional appointments.

It wants the size of the secretariat increased, and the base for recruitment broadened. Consideration should be given to recruiting or seconding officials from a wider range of government departments, from the



universities, and from professional and educational bodies.

Leeds views the prospect of further cuts with profound concern. A reduction of the proportion suggested could not be absorbed. "Set against an already severely reduced base-line and against a background of contraction, such cuts would be disastrous. We could only foresee reductions in funding of this magnitude leading to the stagnation of the academic profession, the enfeeblement of research and the crumbling of the central academic services."

A fundamental reappraisal would be necessary and it would probably be necessary to move numbers away from

areas of high unit cost, such as medicine and some sciences.

Staff levels would have to be reduced. The universities needed regular recruitment of young staff to rejuvenate teaching and research, and some form of nationally-funded voluntary early retirement scheme would be essential.

Leeds said that while it welcomes the "new blood" scheme as an extra channel for new talent, it is concerned that the scheme distorts selection of areas in which appointments are made, and fails to take proper account of the real needs of universities. So Leeds does not wish to see the scheme continued in its present form, particularly if resources are withdrawn from the universities to fund it.

It says the concept of individual tenure in all universities should be defended. "Continuing academic achievement is possible only if each individual has the academic freedom which stems from the assurance that his or her post is secure."

Dr Sandy Raeburn, senior lecturer in human genetics at Edinburgh University, spent Easter weekend on a cycle marathon to publicize the work of Scotland's Cystic Fibrosis Trust. Dr Raeburn, who is also chairman of the Edinburgh and South-East Scotland branch of the trust, cycled the 270 miles marking the branch's boundaries. He raised the money for CF research through a competition to guess his average cycling speed.



NF student seeks injunction

Patrick Harrington, a member of the National Front, is taking legal action against the administration and students of the Polytechnic of North London where he has been prevented from attending philosophy lectures by pickets of up to 200 students.

An interim injunction was sought on Wednesday instructing the polytechnic authorities to ensure reasonable access to the college's premises and students to refrain from molesting Mr Harrington or denying him access. Damage and a permanent injunction is also sought but a date for their hearing has not yet been set.

Mr Harrington, who has attended the polytechnic for 18 months, was originally registered as a humanities student but switched to philosophy at the beginning of this academic year. The picket started when students discovered Mr Harrington's involvement with the National Front. They claim his name has appeared in National Front publications as a contact for the organization's student wing.

The injunction against the students is not addressed to the union but to a single student on behalf of himself and others who took part in the picket which, Mr Harrington says, have been organized by the Socialist Workers Students Society.

Polytechnic administrators and students have met with representatives of the Inner London Education Authority who are taking a keen interest in the affair. PNL are considering adopting the ILEA guidelines regarding the distribution of racist literature in colleges. Mr Newbold, administrative head of further and higher education at ILEA said that PNL's delay in adopting the guidelines is a matter of timing rather than intention. He adds that the opposition to Harrington appears to be based on his activities within PNL and not because of his membership of the National Front.

NUS conference report, page 6

Exam plans worry academics

Any merger of GCE O levels and CSE examinations could reduce standards of entry into higher education and precipitate the need for four-year degrees, according to a group of mainly right-wing academics. The group, drawn from universities and polytechnics, believes high standards achieved at O level, particularly in science, mathematics, and languages, are essential-grounding for a level work. Any decline in A level performance would create problems for higher education institutions, it believes.

The group of 16 includes Professor Brian Cox, professor of literature at Manchester University, a founding Black Paper author, Professor Julius Gould of Nottingham University, Lord Beloff, Norman Cash, former professor at St Andrews, R. V. Johnson, former professor at Aberdeen, Dr Ken Watkins at Sheffield University, and

Day release figures decrease

Overall enrolments to non-advanced further education courses remain fairly static around the one and a half million mark between 1978/82, despite major increases in full time part-time attendance, the latest Department of Education and Science statistics show.

One of the major reasons for this is that although students on full time and sandwich courses increased by 81 per cent, enrolments on part-time courses involving release from employment decreased by 34 per cent between that period, while evening enrolments fell by 16 per cent.

A breakdown of this period in the last four years between 1978 and 1982 indicates that this is likely to be a continuing pattern. During that period full-time and sandwich enrolment grew by 23 per cent as did the part-time mode. But at the same time part-time day release enrolments fell by over a third.

In total the number of students released by employers fell by some 140,000 or 31 per cent during that period, with the decrease being slightly less for females and for those aged 16 and over, than for males and those aged 16 to 18.

Among the industries which exhibited the largest percentage decrease in enrolments between 1978/82 were the metal goods, engineering and vehicle industries. This reduction is reflected in the fall of nearly 70,000 in the number of students studying for the examinations of the City and Guilds.

During this four year period, there has also been a marked increase in the number of students taking full-time examinable vocational courses, some 35 per cent as compared to only 10 per cent increase in the numbers taking GCE examinations.

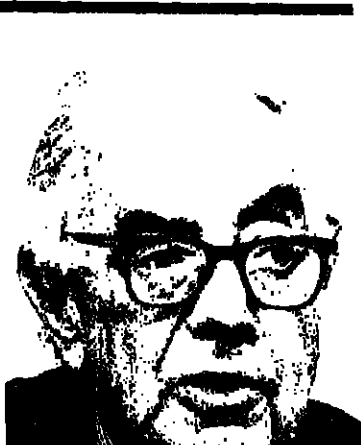
DES Statistical Bulletin 5184



Lords with a common cause

Earl Jellicoe, and the Lord Shackleton of Burley, who in the early 1970s faced each other in the House of Lords as Leader of the House and Opposition Leader have now joined in a common cause. They have been elected chancellor and pro-chancellor of the University of Southampton.

Lord Jellicoe (left) is currently chairman of the Medical Research Council. Lord Shackleton, (right) a life peer, has had a distinguished career in industry and politics.



Hope for art collections

by Paul Flather

A ray of hope has emerged in the patient campaign by Britain's handful of university museums and galleries securing extra funding to keep nationally significant treasures on public display.

The museums and galleries, led by the Fitzwilliam at Cambridge and the Ashmolean at Oxford, using their influence in Westminster and Whitehall have been pressing for a direct grant to cover what they see as duties to the community and the country over and above their role as university teaching assets.

Now Lord Gowrie, minister for the arts has confirmed that the £70,000 (20 per cent of budget) currently paid to the Whitworth Art Gallery at Manchester University by the Greater Manchester Council will be maintained by the Government in the form of an earmarked grant given through the University Grants Committee once the council is abolished under proposed local government reforms.

This has given a real fillip to the directors of the university galleries and museums. The principle of earmarked UGC grants has now been established. They plan to launch a more concerted effort to show just how much they do for their local communities against great odds.

The Whitworth for example, aiming to "serve the whole of north west

England", is trying to absorb a 13.5 per cent cut over three years. The Ashmolean for the first time in 300 years has had to close on Mondays, and the Fitzwilliam, with 200,000 visitors last year, can only keep half its galleries open at any one time.

Lord Strabolgi, the Opposition spokesman on the arts, raised the plight of university museums in the Lords on March 26. He received sympathy from Lord Gowrie, but no extra money. In another reply in February Lord Gowrie said the museums were an integral part of their universities and had to look to the UGC for support.

Now Professor Frank Willeit, director of the Hunterian Museum and Art Gallery, run by Glasgow University, has called for a new concerted campaign. "University museums have been severely deprived, perhaps more than any other types of museums in the country."

"If we are to be able to perform our important duties for the public we must have extra funding. I strongly welcome this as a chink of light for us. He said it will cost his gallery £169,000 to remain open to the public, but only £8,000 has come from local authorities.

Lord Strabolgi said he would be raising the matter again. "I am profoundly dissatisfied with the Government response so far. Not only is scholarship at stake, but also the

display of works of international reputation."

Sir David Piper, director of the Ashmolean, said unless the Government gave more funds extramural activities would have to be cut. At present the Ashmolean receives no local authority funds. The Fitzwilliam does receive money to help with Sunday opening.

Other sources of funding have been rejected. A study at the Ashmolean showed that a £1 a head entrance fee would not show a profit for 10 years. Selling paintings is rejected. Only major works are worth selling and as the attempt by the Hunterian to sell 11 Whistler paintings four years ago to help pay for its new gallery showed, can cause resentment. Museums are also constantly searching for external funding.

Professor Michael Jaffe, direct of the Fitzwilliam, believes that in many ways the museums have "outgrown" their universities. "In the current climate it is just not possible for universities to adequately fund the museums."

Dr Graham Pollard, the deputy director, expresses a wider fear about how cuts are destroying morale within the museums and seriously undermining the career structure of keepers who act as academics preserving the status of the collections. "Keepers are just getting older. There could be real problems in the next decade."

Fishing for compliments

North Staffordshire polytechnic, reputedly the least fashionable of Britain's 30 polytechnics, has hired a public relations firm in a six month experiment to try and improve its image.

The firm, Shipway Communications Limited, has been appointed to release information about the polytechnic's activities to national and regional media and particularly to trade papers, according to North Staffs' own information officer Ms Janet Warburton.

"We have a name for being unfashionable at the moment, but now we are expanding rather than contracting," she said. "If people read nice things about us in trade magazines, they will think that's a place where they do interesting work. It's a gentle process". The contract would be reviewed at the end of June.

Union fails to resolve research staff question

by David Jobbins

Leaders of the university lecturers' union have failed to reconcile internal conflicts over policy on a career structure for research staff.

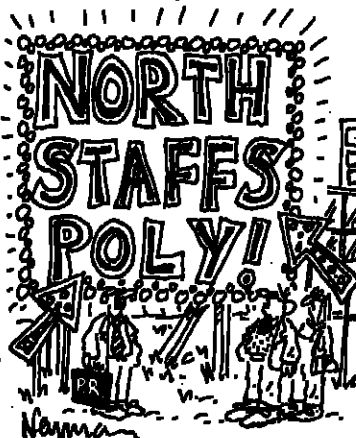
The executive of the Association of University Teachers has been unable to endorse a draft policy drawn up by the union's contract staff research committee and is consulting union members before reconsidering the issue.

There were three distinct approaches to finding a solution to the problem of researchers on short term contracts, often with inferior employment protection rights. Should more permanent research posts be created? Should more leaping posts be created to be taken up mainly by people currently on short term research contracts or should, as the committee recommended, universities make a declaration of intent that researchers be transferred to permanent posts if it

conforms to their academic plan? The divisions illustrate the AUT's chronic difficulties in coming to terms with the research staff problem. It has traditionally supported the concept of the academic with a balanced commitment both to teaching and research - and the concept of a career researcher has until very recently been anathema.

This view surfaced again during the executive's discussions when it was suggested a large number of contract research staff, even a majority, had no research beyond their first contract - and that this should be recognized in the policy.

The research staff committee, in its paper, warned of a trend towards undermining the research component of UGC posts by increasing substantially the teaching commitments. And it suggested that each university should set up a special commission to provide greater continuity of employment, for example by bridging the gap between contracts.



NAB support for textile courses

by John O'Leary

An inquiry by the National Advisory Body has rejected advice from Her Majesty's Inspectorate which would have led to a reduction in the number of courses in textile technology.

The Inspectorate had suggested a review of polytechnic and college courses in the subject after identifying it as an area of low enrolments and diminishing employment demand. But NAB officials found that the demand for qualified manpower was unlikely to diminish and might even increase, while low enrolments were a function of the specialist nature of the courses.

Courses at three polytechnics and four colleges were included in the review, which was initially postponed while three regional advisory councils carried out their own examinations. It was further delayed by the NAB's 1984/85 planning exercise for the whole of the local authority sector.

The North West RAC's review resulted in concentration of provision at the Bolton Institute of Higher Education, with the closure of courses at Blackburn and Oldham colleges of technology. Both the East Midlands and the Yorkshire and Humberside councils decided to support the continuation of existing provision to meet regional and specialist demands.

Officers at the NAB, having visited all the institutions, and taken advice from validators and inspectors, decided that account had to be taken of the wide range of work covered. "Textile technology, though a single subject code in the statistics, is not a single subject. It encompasses six fundamentally different technologies," it said.

Sub-degree courses will now remain at Huddersfield and Trent polytechnics, Derbyshire, Kidderminster and Bradford and Ilkley colleges, as well as at the Bolton Institute. The only university provision is at Leeds and UMIST.

Patrick Nuttgens



After 56 columns, it is time to say goodbye

This being my last monthly column for *The Times Higher Education Supplement*, I have been looking at my box of cuttings and discover to my surprise - though clearly not to that of the editor - that I have been writing the column for over four years, since in fact December 1979. I have even read through some of the cuttings and am amused at the range of subjects that I have tackled.

When I responded to the invitation to write a column I thought that with any luck I would have enough material to produce three columns. I wrote down some notes and have not yet used the notes for two of them. In fact I have written 56 columns. Unless I have lost some, as far as I can tell I could go on writing as long as the world behaves with enough stupidity to provoke my ephemeral thoughts. There is no sign that the world - and certainly the world of education - is going to behave with anything but its accustomed absurdity, so the material should be endless. But I (and the readers) need a rest.

One aspect of the columns of which I am moderately proud is that they have not all been about education, despite the fact that I have spent most of my working life in that richly argumentative and endlessly provocative field. Only 12 of the articles have been specifically about education, though I suppose all have had some educational message, well hidden. Nine have been

one about Edward Boyle, whose death was a serious loss to the academic world. The most vulgar was a piece I wrote about my travels in Ireland, with words which I expected the editor to censor. The most unpleasantly timely was a piece about a disastrous speech by Bob Hawke at a graduation ceremony in Tasmania before anyone thought that within a few months he would be Prime Minister. The most well read - at least in Australia, where I met many heads of colleges who seemed to be compulsive readers of *The THES* - was a piece about two kinds of people (if you want to know which two kinds

of people you will have to look up the files). The passage they liked - possibly influenced by being Australian? - was my saying to myself in the midst of all the problems that are showered upon a polytechnic, or no doubt anywhere else: "I don't care what the buggers do to us, we shall survive and do a good job for our students".

The reason, I went on, that I don't care what the buggers do to us is that they have already done it. We are used to being urged to expand, blamed for not doing so, ordered to contract, told not to contract, told to raise standards, blamed for letting them too high, urged to spend the budget before the end of the financial year, condemned for spending it, held up to scorn for doing something, censured for not doing it. We survive, to use our acquired motto, in spite of everything.

I need a rest and so does Leeds Polytechnic. There are members of it who complain that they no longer have any secrets and now know far too much about me for their comfort. But I also, like many another academic, have an unpleasantly growing feeling that I have ceased to believe in anything I hear.

Not only do I not believe what politicians (of all kinds) say, I don't even care. I don't care what Mark Thatcher has done if he has done anything in Oman. I don't care what Prince Andrew is getting up to, I don't care if Conservative ministers

sleep with hundreds of girls or none at all (though that might be sufficient unusual to be news). I can't get enthusiastic or irritated with Benn or Scargill or Livingstone though I hope they don't become too influential: life is difficult enough already. I find most television mindless and (now that after an illness I have watched a great deal of it day after day) increasingly boring. I never thought much of the *Horse of the Year Show*; now I am bored by endless quiz shows with a few clever people and a lot of actors; I cannot bear to watch any more shows in which actors give each other gold plated trophies so hideous that the recipients winco on seeing them.

At a conference last week I met several academics who told me that the only things they read in *The THES* are my columns and Laurie Taylor. That reminded me of an evening in Edinburgh in the 1950s when Compton Mackenzie remarked that Nigel Balchin had said to him that *Sinister Street* and *The Small Back Room* were the two greatest novels of our time. "Sinister Street, of course," said Mackenzie without the flicker of an eyelid, "but *The Small Back Room*..." Following that precedent: "My column, of course," but Laurie Taylor? I ask you. In fact, his column is the first thing I read.

David Jobbins reports from the NUS conference at Hull



NUS full time executives for 1984/85 are, from left: Steve Morgan (vice president welfare), Alan Smart (chairperson, NUS Scotland), Phil Woolas (president), Lesley Smith (vice president education), John Murray (national treasurer), Richard Marshall (chairperson, NUS Wales). Missing is Jim Doran, national secretary.

NUS gag on racists survives intact

Declared racists and fascists will continue to be denied a platform by the National Union of Students, despite moves to change the policy.

During the most contentious debate at the NUS Easter conference in Hull, the Right tried to drop the policy in favour of a commitment to free speech while the Left tried to extend it in a way which could have led to ministers such as Sir Keith Joseph, the Secretary of State for Education and Science being banned from speaking at affiliated universities and colleges.

Both were defeated, but delegates voted to extend the list of organizations regarded as racist or fascist to include Tory Action and WISE, two organizations with tough anti-immigration policies identified in the *Panorama* television programme on extremist infiltration of the Conservative Party.

The National Front, British Movement and the League of St George are already barred.

Liberal executive member Mr John Murray told the conference: "We have to ensure the policy is not abused and not used to ban groups or individuals who are not fascists or racists but are simply not liked by their opponents."

And Mr Neil Stewart, the union's president, said: "Unless we are absolutely clear about what is a racist or fascist... you will not know a racist or fascist when they come up and attack you."

Mr Stewart said that the policy prohibited not only the listed organizations, but individuals such as the "neo-fascist apologist", Mr David Irving, the histo-

rian, who "clearly set themselves out as racists or fascists".

Calling for abandonment of the whole policy in favour of a commitment to free speech, Mr Richard Russell, from Nottingham University, called it hypocritical to use the tactics of the extreme Right while condemning its policies. Mr Andrew Hartley, also from Nottingham, added: "We can destroy them intellectually and not undemocratically."

Supporters of the free speech move were heavily defeated - supported only by the Social Democratic Students and the Conservatives, while Labour, Liberals and others voted against. Also rejected was the extreme Left view that only a "programme of the working class unity needed to defeat racism."

Instead, delegates supported a call for the NUS to establish an anti-racist committee to be elected at an annual conference solely on the issue, with black students playing an integral part.

Delegates also voted to affiliate to the National Campaign Against the Police Bill after an often emotional debate on the day after the beginning of the siege of the Libyan People's Bureau.

NUS president Neil Stewart sent President Gaddafi a telegram condemning the shootings outside the Libyan People's Bureau. "Demand you cease use of force and violence in political matters," Mr Stewart said.

NOLS keeps its grip on leadership

The National Organization of Labour Students has consolidated its hold on the NUS leadership by capturing eight of the 17 seats on the executive, including four of the five powerful full time places.

In addition, NOLS, which captured the presidency of the NUS two years ago, can count on the support of the Scottish and Welsh NUS chairpersons, two non-aligned part timers, and a socialist in NOLS dissent, on most issues.

But the signs are that the organization has reached a plateau in its strength, with the narrow 26-vote majority for incoming president Mr Phil Woolas over his Left Alliance rival, Ms Jane Taylor reflected throughout the subsequent polling.

NOLS fought only three of the remaining full time posts, giving Left Alliance/Liberal Mr John Murray a free run for treasurer. In return Mr Jim Doran, the NOLS candidate, was able to romp home as national secretary.

But for the key jobs of vice president education and vice president welfare Labour had a tougher time. For VP welfare, Mr Steve Morgan, had a 32-vote majority in a straight fight with Social Democrat Ms Jackie Sadek.

While for education, Labour's Lesley Smith, a member of the current executive for only three months, traded the lead twice with her LA rival, Frank Howard, to win by an eventual margin of just 27 votes. Ahead in the first round by 330 to 301, Lesley Smith fell four votes behind when the Tory transfers went mainly to Howard, only to regain the lead when the Socialist Worker Student Society candidate was eliminated.

NOLS organizers were shaken when one of their rising stars, Wolverhampton Polytechnic president Mr Les Emery failed in his first attempt to win a place on the executive and it seemed that by securing his election no Conservative could be elected.

In the end Emery was elected while Mr Chris Davies won a seat for the Conservatives.

The Left Alliance, bitterly disappointed at Ms Taylor's defeat, rallied with five places on the executive - including a Communist back on the executive once more, two Liberals, and a Labour Party member.

The SDP retains a seat, while for the first time a member of the executive was elected on a further education ticket. The Independent Labour Party is supported by Ms Sharon Robinson.

NOLS control of conference seemed to have slipped, with the political extremes taking every opportunity to make their opposing point. At one point, in a lengthy furor over the invitation to a rank and file Yorkshire minor as guest speaker, the tension boiled over into scuffles.

Social scientists 'want to play their part'

by Olga Wojtas
Scottish Correspondent

A group of social scientists will meet with MPs in the House of Commons next week to continue efforts to play a much greater part in British policy-making.

The all-party discussion group, "Social Science and Policy", chaired by Lady Nancy Sears, was set up last month under the auspices of the Association of Learned Societies in the Social Sciences.

Professor Frank Bealey of Aberdeen University's politics department, who initiated the group, said it aimed to enable social scientists to present their research findings and general thinking to MPs, with the emphasis on contemporary national problems.

Mr Elliott Stern, fellow of the Tavistock Institution of Human Relations, will speak at the group's meeting on Monday on "cooperating about youth training: problems of delivery

and organization." Another meeting, planned for May 21 when Prof. Lawrence Freedman of the Department of War Studies at King's College London will speak on "Does the Control have a Future?"

Professor Bealey said social scientists were anxious to defend themselves against accusations of impracticality and lack of realism. Many were conscious of how much less they were involved in policy making than their American counterparts and wanted to demonstrate their usefulness.

Professor John Eldridge of Glasgow University's sociology department, who chairs ALISS said: "The main contribution that social scientists are able to make to our understanding of society is relevant to the work of politicians."

The topics for discussion are primarily chosen by parliamentarians themselves and our task is to be suitable contributors."

Historian sees Dark Ages danger in arts run-down

Continued government cuts in the arts and humanities could lead society into a "new Dark Ages", Sir Ernst Gombrich, a leading art historian, says in a new book.

He explains in a preface to *Tributes*, a collection of essays, that his "ulterior motive" was "to exemplify the nature and value of branches of learning which are in danger, almost everywhere, of being squeezed out of higher education."

Sir Ernst, who turned 75 last month, was Professor of the History of Classical Antiquity at London University and a director of the Warburg Institute until his retirement in 1976, and before that Slade Professor of Art at Oxford University. His books include *The Story of Art*, which has sold two million copies, *The Sense of Order*, and *The Image and the Eye*.

"I did not want to remain wholly silent," he says in the preface, "while the meagre funds available to the universities for these studies are increasingly diverted to specialized courses in science and technology."

He told *THE TIMES* this week that he

had read the Swinerton-Dyer questions and he knew the Secretary of State for Education wanted to cut size practical and vocational subjects at the expense of the humanities.

"This switch is a totally false alternative. I am not against vocational training. Only someone very stupid would be. But one can be a splendid engineer and still enjoy painting and art."

He is particularly worried by decline in languages. "We know languages not just to read Dr. or French literature. Cutting off a source of knowledge will impoverish us all and lead to what I call a new Dark Ages for the humanities."

Sir Ernst's intervention coincided with a growing university lobby to defend the arts, which in recent years has included a passionate statement from Sir Owen Chadwick, president of the British Academy, and the formation of a standing committee of faculties to defend and promote disciplines.

Tributes is published by Phoenix Oxford, at £17.50.

Newcastle employability study

Newcastle University has been examining its curriculum to find ways of improving its graduates' employability. Discussions are taking place in faculties and departments on subject content, and the skills and characteristics derived from study and university life as a whole.

According to the report of the careers advisory service the attempt "raises fundamental questions about the purposes of higher education and

of any one course within it: about details of curriculum and of course structure, subject by subject, about teaching methods proffered and the study methods demanded; about criteria of success and methods of assessment; about student expectations; about admissions policy and criteria of selection; and about the message which all this conveys to pupils in schools and to those who advise them in their quest for higher education."

National Academic Awards. In fact, by drawing so much on the CNA's information to rank courses as a basis for grant allocations, it is in danger of destroying that body's admirable standing with the institutions. There is no question about whether the institutions prefer to be crawled over by HMEs or by the CNA.

But why is this cost-conscious, anti-bureaucratic government allowing both operations to happen, anyway? Now they are adding a third scrutiny for the polytechnics - the Accreditation Council for Teacher Training.

Before the NAB's interim report expires next January, the Government should at least consider merging the NAB and the CNA. This would bring together sound academic judgment (done by panels with funding arrangements, which should in turn be broadly accepted by the Department of Education and Science on such matters as the breakdown between types of institution, part-time waiting, etc.)

It really is important to think again, and there is still time to stop the fudging.

Keith Hampson

The author is a Conservative MP for Leeds North-West.

Medical units calculate lab savings

by Jon Turney
Science Correspondent

Directors of Medical Research Council Units throughout the country are now working out how they can make the savings in laboratory costs ordered by MRC headquarters last month.

Budget cuts in the council have produced reductions averaging over 20 per cent in money allowed for laboratory equipment and supplies in nearly 60 MRC establishments and research units. This will save the council nearly £3m in 1984/85. However, the council says this is not enough and its cash shortage will also affect university grants this year, with current grant

holders to be asked for savings on supplies and fewer new grants.

The council declines to publish a full list of the cuts in research units, but some have been protected from the full reduction because they have new directors or are undergoing reorganization. They include several of the large MRC establishments like the National Institute for Medical Research at Mill Hill and the Radiobiology Unit at Harwell. But the new guidelines will cause problems even for directors subject to smaller cuts.

Dr Dai Rees, director of the NIMR, said his budget for laboratory equipment, materials and travel - around £2m last year - had been cut by just

over 10 per cent, allowing for 5 per cent inflation. He judged the institute could manage at this level for a year by putting off buying large items like protein sequencing machines. But there would be real problems if the same happened next year.

Dr Sidney Brenner, director of the celebrated MRC molecular biology laboratory in Cambridge was also most concerned about laboratory capital costs. "Equipment here has been very severely cut, but we will try to keep as many people working normally here as possible", he said.

Among the other larger units, the Clinical Research Centre at Harrow has come out near the average of 16

per cent, and the Dunn Nutrition Unit in Cambridge and the Radiobiology Unit at Harwell below the average. The council has also sought to reduce the effect of the cuts by allowing directors to move spending from one accounting heading to another and encouraging units to seek outside money.

Professor Gordon Adams, director of the radiobiology unit, said he was negotiating contracts with the European atomic energy agency and with outside drug companies.

The cuts arise because the council received less than it hoped for from this year's division of the science budget by the Advisory Board for the Research Councils.

140 jobs to go in ILEA cost-cutting exercise

by Karen Gold

One hundred and forty academic staff jobs are to go in Inner London's further and higher education, some of them before the end of this academic year.

The Inner London Education Authority is to seek 140 voluntary redundancies or early retirements as part of a package of savings on academic and non-academic staff and governors' allowances to meet the reductions in the advanced further education pool allocation to inner London.

Subcommittees have agreed with staff associations voluntary redundancy procedures which include a ban on a general "draw" among FE lecturers seeking volunteers. Instead specific areas will be designated, the first being marine engineering; staff will be told of the compensation terms and invited to apply.

Existing union agreements contain a minimum one-year period of notice, but to make the £2,900,000 savings envisaged, the authority needs to shed some staff by this August. So the further and higher education subcom-

mittee agreed last week that only staff agreeing to waive their right to that notice would receive the maximum enhancement of their salary.

The cost of the scheme is around £500,000 over a full-year, making a saving of almost £2½m. The scheme is "based on the most generous permissible terms applicable to each individual, including a severance payment... based on actual salary rather than the statutory limit of £45 per week", according to the ILEA paper outlining the agreement.

The authority has also agreed to lose posts by natural wastage wherever possible, and to make provision for retraining of up to 30 staff in place of voluntary severance.

The scheme comes as ILEA announced the distribution of cuts among its polytechnics and colleges. Despite £15m topping up this year - some of it distributed on a positive discrimination points system as reported in *THE TIMES* last week - the authority has not fully restored the reductions in income from the advanced further education pool.

CVCP in favour of incentives

The Government should provide tax incentives to encourage and assist adults to take post-experience vocational education courses, the Committee of Vice Chancellors and Principals said this week.

It was commenting on the University Grants Committee report on continuing education, which it warmly welcomed. "Universities want to see the expansion and development of continuing education as a central part of their activities. This is an urgent matter for the national economic well-being."

But the CVCP stressed that adequate Government funding was essential to allow the recommendations in the report to be carried out. Expansion in PEVE courses in engineering, science and other vocational areas was urgent, it required, and the greatest need for additional funding was in the immediate period up to 1990.

The CVCP noted the assumption that there would be a threefold increase in full-time equivalent PEVE students (excluding medical and dental) by the end of the century, from 7,100 to 20,000.

But the committee says it fears that the recommended increase in recurrent grant, from £142 to £500 per PEVE student will not be adequate to provide for the expansion.

The CVCP also says there should be additional Government funding for the expansion of part-time numbers, and there was a strong case for pump-priming money for some part-time degrees.

The recent cuts to adult liberal education amounting to 14.7 per cent over three years, are also criticized. "We believe that, as extra-mural departments have traditionally received matching contributions from local authorities, the Workers' Educational Association and other bodies, the cuts will be more severe than anticipated and will destroy many long-established partnerships with other providers."

The CVCP particularly fears the withdrawal of courses from outlying and rural areas.

More women applying for university, says UCCA

by Ngalo Crequer

The trend towards a greater proportion of women candidates for university is continuing, and there is now a big increase in female overseas applicants, according to the latest figures.

The Universities Central Council on Admissions says that by March 31, this year there had been 153,999 applications. Numbers for UK women had risen from 65,328 last year to 66,239, a rise of 1.4 per cent.

Overseas numbers had again increased, continuing a recovery which started last year. They have gone from 14,065 to 15,695, a rise of 11.2 per cent. Within this, overseas women candidates have risen from 4,195 to 4,917, an increase of 17.2 per cent.

The figures show a UK decrease of 0.2 per cent, which UCCA "insignificantly", and a total home and overseas increase of 0.7 per cent. UCCA estimates that final applications will be about 173,000, compared to 172,738 last year.

Applications received after the end of March are too late for normal processing and will be dealt with in the continuing application procedure, or in clearing.

There have been substantial increases in applications to education, pharmacy, electrical engineering, general engineering, business management studies, accountancy, law, combined social studies with arts, and architecture.

There have been decreases in medicine, dentistry, aeronautical engineering, chemical engineering, mechanical engineering, agriculture and forestry, biology, mathematics (excluding computing), physics, geology, combined social studies, and French.

Bristol Poly's £5m expansion halted by row over school

A £5m building programme at Bristol Polytechnic may be postponed following economic and political objections to housing courses in a disused boys' school for a year.

An integral part of the programme was the sale of a city centre site, worth an estimated £1m. One option was to move the entire faculty to houses at Greenway school, a comprehensive which closes this summer.



The cheeping of the chicks provides a rhythmic background to the clucking of the hen in this notation by polymath and scientist Athanasius Kircher, a seventeenth century Jesuit. His work can be seen at an exhibition at the Wellcome Institute for the History of Medicine, 183 Euston Road, London, until June 15.

Student CND to be stepped up

Ways to step up the anti-nuclear campaign in the universities and colleges are being explored in high-level discussions between the Campaign for Nuclear Disarmament and the National Union of Students.

One possibility put forward by NUS president Mr Neil Stewart but not so far formally considered by CND is for a jointly-administered trust to be established to finance an official to look after the affairs of Student CND. The trust would be funded by voluntary contributions.

Student CND has not proved the campaigning success the two organizations had hoped for, largely because of the annual turnover of activists and the consequent lack of continuity. And there are signs of a backlash against unilateralism, according to the Federation of Conservative Students.

A number of universities have dropped CND affiliation in favour of a multilateralist position, according to FCS chairman Mr Paul Goodman.

CND maintains its individual membership is growing healthily and has no fears for Student CND. Treasurer Mr Mike Elliott said: "There are obvious reasons why NUS should suggest the possibility of a trust, but we are more interested not only in the question of resources but how we can fight a campaign in the student world and universities and colleges generally."

"A trust is one of many things up for discussion between myself and NUS and from our point of view it would not be easy to enter into an arrangement like this."

Natfhe retiral

A senior official of the college lecturers' union has retired on health grounds. Mr Derek Weltzel, negotiating secretary of the National Association of Teachers in Further and Higher Education, had been associated with the union and its predecessor, the Association of Teachers in Technical Institutions for 30 years.



Crossing the great divide...

Translatory issues have suddenly become fashionable. This summer the merger of the Ulster Polytechnic with the New University of Ulster will come to fruition to create a new university institution in Northern Ireland. A short while ago the Inner London Education Authority announced proposals for the reorganization and development of higher education in inner London, including a proposal for a feasibility study into a merger of City University and the City Polytechnic. Like the Northern Ireland development it is suggested that such a proposal might reshape, and redefine the binary divide and be a genuine translatory development.

The National Advisory Body is also interested in translatory issues, although of course primarily concerned with planning higher education in the public sector. It also has a number of translatory working groups, with membership from both the public and university sectors, looking at specific areas of academic work. The Committee of Directors of Polytechnics in their response to the Government's consultative paper on the future of the NAB have drawn attention to the absence of a proper translatory mechanism for planning higher education across the sectors thereby signalling their concern about their issue.

One problem is the need to sort out the real issues for debate from the spurious. The fact is that neither the university nor public sector is homogenous. There are wide varieties of institutions with different academic profiles in both sectors and some polytechnics and universities are quite similar in terms of their provision. The fact that the former colleges of advanced technology were transferred to the university sector has ensured that some universities started out with a commitment to vocationally orientated course not dissimilar to many in the polytechnics and some vocational courses such as medicine are to be found exclusively in the university sector. So the academic basis for the so called binary divide is by no means clear cut and never was.

The administrative structures on the other hand remain distinct and formidable.

Above all there is a clear understanding on both sides of the binary line that the newfound interest in translatory developments by Government and the Department of Education and Science is sharply accentuated by their perceived need to rationalize higher education provision. This is also the impetus which has led the NAB and the University Grants Committee to establish translatory working groups no areas of expansion have been chosen for consideration.

Those with a concern for higher education believe a debate on binary policy is long overdue. The Government, however, will be seeking to stimulate such a debate and use it to implement contraction. To succumb to a policy of divide and rule will be folly and Natfhe, together with Association of University Teachers, is determined to prevent this happening.

Jean Bocock

The author is the assistant secretary for higher education at the National Association of Teachers in Further and Higher Education.

"Fudge and Mudge" (these days no longer trips off Dr Owen's tongue with the old frequency. But it was not a bad description of the way British government tends to work. It dominates - and has for years - government policies in public sector higher education.

By and large Sir Keith has not been intimidated by the clamour of the vested interests which are so rife in the educational world. But in the public sector he seems to prefer a quiet life. The local authorities have won again.

The National Advisory Body is to live on. It could have been merged with the UGC - should be. The polytechnics could be changed into directly-funded institutions free of local authorities - and should be. But no, the Government has announced that the NAB represents the best basis for developing long-term planning machinery."

I can find little evidence of the supposed 'achievement to date' which is a justification presented for turning it from an interim to a permanent body. But what's new? I remember writing when it emerged as William Waldegrave's sop to the local education authorities that it would inevitably drift into permanence. These things always do. Further reform would these days be

PARTY LINE

New life for Fudge and Mudge

too controversial when one considers the prevailing Department of Environment attacks on local government.

Even with the NAB the absurdities still go on. It is convenient, for example, for local authorities to urge their polytechnic to keep on what would otherwise be an empty building and run it efficiently because it is cheaper for the cost of that building to fall on the post than to leave it empty and the costs fall on the rates.

The NAB has shown itself, if not second-rate, all too prone to be mechanistic in its approach. It does not seem to take enough account of the extra costs that accrue to inner-city polytechnics with old and dispersed buildings. In general it needs to be more flexible. Nor can I understand why it perpetuates the staff/student ratio in sociology than in engineering.

There is of course a fundamental flaw. The NAB's responsibility

spans all advanced courses - wherever they are, and whatever they might be, and whether they are for several thousand students in a polytechnic or only 20 odd at a local further education college. It is simply crazy to treat advanced education as some sort of seamless system. The problem is quite clearly of two different sorts.

The NAB is no doubt now about to start work on the allocations for 1984/85. I trust that we will not have a rerun of last year, when it managed to fly in the face of the policy pursued by all governments since 1966 of aiming to concentrate full-time and sandwich higher education courses in a limited number of institutions.

Last year, by proposing an across-the-board 10 per cent cut in the funding of advanced courses, the NAB was indirectly switching resources away from the polytechnics and the other main institutions. Ten per cent of funds

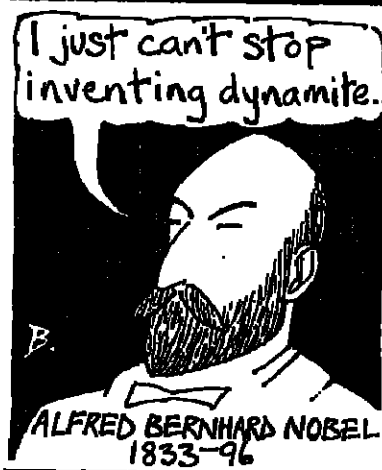
which may only amount to, say, 5 per cent of a further education college's income, is hardly the same, and has hardly the same effect, as removing 10 per cent of a polytechnic's revenue.

It is really sensible to go on with a single body responsible for what are essentially different systems: the small amount of advanced work spread among some 400 colleges, often of the small FE kind whose work is basically at the craft or GCE level, and on the other hand the polytechnics with an average of some 5,000 students, nearly all of whose work is at degree or higher professional level?

The Government could profitably find more of its cuts by rationalizing the advanced provision in the further education sector, and also apply itself to the thorny question of the role and future of the colleges of higher education.

Finally, the NAB sits very uncomfortably with the Council for

overseas news



Poles make a protest behind the irony curtain

Scientists and researchers at the former Nuclear Research Institute at Swierk, which was "reorganized" into three smaller institutes during the martial law period along with major sackings of pro-Solidarity personnel have not lost their sense of humour.

The most recent issue of the underground monthly *Wokopach* (in the *Trenches*), which has close links with Swierk, contains a sardonic squib, parodying the "spontaneous" Party protests against Lech Walesa's Nobel Prize last October. The authors of

the squib, who describe themselves as a "socially conscious team of workers at the Institute of Atomic Energy, the Institute of Nuclear Chemistry and Technology and the Institute of Nuclear Problems" go further, however; they put forward their own candidates for the "Prize".

Heading the list, of course, comes General Jaruzelski, for taking action to "avoid a fratricidal war in our country and protecting Europe and the whole of humanity from the explosion of World War III" and the prize for economics goes to Zdzislaw

Krasinski, the minister for prices "for finding a way to fill the shop shelves without increasing production".

The medicine prize goes to the Ministry of Internal Affairs for their "achievements in effective beating up of persons without leaving external traces". A Party hack, Janusz Przymanowski, gets the literary nomination for his writings on "outstanding internationalist - patriotic - defence conditions of teaching".

Although a fine example of "black humour", the squib is something

more than the traditional Polish skill in extracting a jest from the most repressive situations. The previous issue of *Wokopach* reported an attempt made by a local party official Roman Broszkiewicz (one of the shames of the "chemistry nomination") to get the Swierk scientists to sign "spontaneous" documents regarding the Western reports of the purging of the Institute.

Such "initiative", Broszkiewicz hinted, would create the right atmosphere for the issue of the scientists sacked from Swierk to be reopened.

Scandinavian cash protests

from Donald Fields

HELSINKI Disaffection with the failure of student grants and loans to engender efficiency in higher education or keep pace with the cost of living has come to a head in Denmark, Sweden and Finland.

In Denmark the question of financial support for students is related to the overall imbalance in the economy, including a foreign debt approaching one-third of the annual Gross Domestic Product, and a 10 per cent unemployment rate complicated by the custom of students going out to work and taking a long time to graduate.

Various surveys suggest that 25,000 students at Copenhagen University are doing the equivalent of 10,000 full-time jobs that could be filled by the unemployed: nationwide, the figure is 25,000 jobs. At the same time the government wants to add an extra 10,000 to the 90,000 involved in all forms of post-secondary education.

The size of a state scholarship is subject to the student's age and place of domicile, but a typical figure is 18,100 kroner (£1,310) a year. This can be topped up by a government-guaranteed loan, varying with the parents' income. Scholarship and loan combined can reach 33,700 kroner (£2,440) a year. When the student's total gross

income exceeds 47,700 kroner (£3,445) the scholarship is reduced, on a sliding scale.

The mathematics are complex, but several articles in the Danish press this spring have argued that if students were paid salaries, the impact on universities and the economy would be highly beneficial. In a persuasive analysis in the liberal daily *politiken* Louis Lauretz, a student of political science, concluded that a salary system would help provide more student places, put some of the unemployed in jobs now occupied by students, give students economic and social security, improve the quality of studies and the atmosphere within the universities, make for a more equitable student intake, and encourage greater equality between students and other sections of the community.

Swedish students are angry because the authorities have been classifying part of the loans they draw - in some cases a half - as taxable income. Since loans account for 92.7 per cent and grants for only 7.3 per cent of a student's "unearned" income (instead of the 75:25 ratio that was once the official target), this can have a decisive effect on personal budgets. Furthermore the taxman does not view the interest paid on a student loan as a deductible item.

Although the maximum assistance (loan plus grant) for a Swedish student over the first four and a half months of an academic year is 14,718 kroner (£1,245). Money for the following term depends on academic performance assessed through a points system. Once a student earns more than 11,165 kroner (£1,000) a year from non-scholarship work the right to a full loan is forfeited.

The Stockholm University student union estimates that this spring the average undergraduate is 905 kroner (£81) a month in the red in terms of available support.

In Finland students at Helsinki, Oulu and Kuopio universities demonstrated this month against a 10 per cent drop in the real value of financial assistance since 1977 and a further 1 per cent decline endorsed by the centre-left coalition government for the 1984/85 academic year.

Animal experimenters canvas support

from our North American correspondent

WASHINGTON

Biomedical researchers in the United States have launched a deft two-pronged campaign to defuse growing public sentiment against the use of animals in scientific experiments. The federal sponsors of biomedical research have been working hard to reassure critics that animal experiments in universities are carefully controlled and monitored. At the same time, the research community is stepping up efforts to convince the public that life-saving medical breakthroughs cannot be made without the use of animals.

The two arms of the strategy were demonstrated vividly in Washington this month at a meeting organized by the National Institutes of Health, which fund most biomedical research in the United States. The audience of scientists and lay people was treated to a series of emotional speeches by the families of individuals whose lives had been saved as the result of biomedical advances that would have been impossible without the use of animals in experiments. Later, NIH officials unveiled new and stricter guidelines which they claimed would prevent researchers from inflicting unnecessary pain and suffering on laboratory animals.

Dr James Wyngaarden, director of the NIH, warned biomedical researchers that public support for animal experiments was in danger of eroding because of a "politically sophisticated" onslaught by those who believed such experiments were inhumane and unnecessary. He said that while computer modelling and other new techniques could reduce the number of animals used for some kinds of toxicological testing, the use of animals "is and will remain central to the research enterprise". To retain public support, he added, scientists would have to demonstrate that they treated animals humanely and used them in experiments only when there was no alternative.

The NIH clearly hopes the new rules on animal welfare will demonstrate its sensitivity to the problem. The rules, which are now to become compulsory for grantee institutions, state the circumstances in which animals should be used and prescribe the detailed arrangements universities should make to safeguard their welfare.

They insist, for example, that the housing, care and feeding of all experimental animals must be supervised by the qualified veterinarian. Experi-

ments involving live, vertebrate animals can be performed only under the supervision of a qualified scientist, but only when the research is likely to yield "fruitful results for the good of society". Whenever possible, experimental animals should be anesthetized to reduce discomfort. And it becomes necessary to kill an animal, it must be done in a manner that causes immediate death.

Most of the principles have been a force for several years. But NIH evidently wants stronger powers to make certain that they are being observed within laboratories. It will no longer be enough for universities simply to state that their facilities comply with NIH requirements. They will have either to submit themselves for accreditation by the American Association for the Accreditation of Laboratory Animal Care or to random inspections by NIH itself. They will also have to give wider powers to the animal research committees which NIH has already asked for on every campus.

Under the new regulations these committees, which must include a veterinarian and at least one lay member and one member of the public, will become a central part of the research complex in virtually every university. They will be expected to devise overall policies for the treatment of animals in the institution's laboratories and review all research proposals which involve the use of animals. They will also be able to veto or suspend experiments in which their guidelines are not being followed.

The NIH, which has agreed to allow a period of public comment before implementing the new regulations, is practicing itself for a similar move in university leaders. Many support stronger regulations in order to stave off the possibility of animal rights organizations persuading Congress to curtail or even ban animal experiments. Others complain that the new regulations will place unjustified financial burdens on universities which have already worked hard to treat animals as decently as possible.

Their complaints have special force in light of the results of NIH visits last year to 10 universities and research institutions. In all cases, the inspectors found, animals were housed in clean and comfortable facilities, and there were no indications of NIH rules being abused. The NIH decision to strengthen the rules, scientists suspect, may have more to do with pacifying the animal-loving public than changing the circumstances in which animals are used in everyday research.

Hungary fights apathy

Hungary's proposed new education bill, due to go before parliament early next year, promises a stick and carrot package of higher standards and greater flexibility in the universities - to judge from a recent two-day parliamentary debate. The new bill covers the whole educational system and is intended to restructure Hungarian education to serve "the great economic-social needs and individual aspirations".

In the universities, these needs are not being met properly, to judge from recent reports in the media on apathy and disillusionment among students.

To meet this, education and culture minister Bela Koczepci described a

more flexible structure of tuition. Students would be allowed to attend extra lectures in other departments, would have more choice in optional subjects and would benefit from a scheme of grades and levels which would allow a basic qualification to be obtained in two or three years. This would leave open the option of further study after a few years of practical work.

Koczepci said students should also be given more time for "self-education" outside their course work. Their instructors should be able to express their opinions competently over a wide range of subjects, and develop "democratic forms and mechanisms" within the universities.

overseas news

Australian row breaks over standards

from Geoff Maslen

MELBOURNE A bitter row has broken out between academics at La Trobe University in Melbourne, over whether some Australian universities are experiencing a serious and continuing crisis of intellectual standards.

Two right-wing politics lecturers, Dr Michael James and Mr Robert Manne, began the dispute with an article published in the February edition of *Australian Society*. In the article, the two claimed that there was growing alarm and despondency among university staff about the failure of new students to cope with the demands of higher education.

But their assertions have been strongly attacked and their motives questioned by several of their more senior colleagues, as well as the federal minister for education and youth affairs, Senator Susan Ryan.

The dispute has thrown into sharp focus the resistance by conservative elements in Australian higher education over government moves to broaden access.

In their article, James and Manne claimed that university students were demoralized at having been encouraged to embark on traditional and difficult courses of study for which their schooling has left them singularly ill-equipped.

They claimed that many university

teachers were convinced of a decline in the general knowledge, the conceptual capacity, and the level of literacy of their students. Absenteeism from tutorials and lectures, plagiarism in work for assessment, late submission of assignments all seemed to be growing problems.

In their report, James and Manne described the outcomes of a study which looked at the results obtained by La Trobe first-year students in the six largest departments of the humanities and social science schools.

Comparing the annual results of students who passed, failed or dropped out between 1975 and 1983 revealed a steady decline in the proportion of students who passed, and a corresponding rise in the percentages who failed or dropped out.

In the case of the two authors' department - politics - the difference was startling: in 1975, more than three quarters of first year politics students passed their course; in 1983, only a little over a half did.

James and Manne were particularly critical of attempts by the federal government to persuade universities and colleges to enrol more "disadvantaged" students.

They said that while this may mask the problem of youth unemployment it could lead to some universities having to lower their own standards. This would lead to a decline in the reputa-

tion and therefore the value of the qualifications students would then have.

But vice chancellor of La Trobe University, Professor John Scott, immediately rejected claims that the university's entrance policies were affecting academic standards. La Trobe had been one of the pioneers in Australia in providing a broad range of opportunities for admission to its undergraduate courses, he said.

The interpretation of data in the report by the two academics did not reflect the policy of the university, "nor the policy of the board of studies of the academic area in which the authors work," Professor Scott said.

Professor Scott's comments have now been followed by a strong attack by five colleagues of James and Manne and by the federal minister for education and youth affairs, Senator Ryan.

In a rare display of academic infighting, the five opponents of James and Manne attacked the findings and described the authors as "politically blinkered and thoroughly amateurish" and of using "arbitrary, incoherent and shoddily marshalled statistics".

In the same issue, Senator Ryan said the claims of the two academics contained some errors of fact and many errors of interpretation of the Labour government's education policies.

The dean of the school of social sciences, Professor Ronald Wild, the

deputy dean and professor of legal studies, Professor "Kit" Carson, and a sociology lecturer, Dr David De Vaus, responded in a long analysis of the data used by James and Manne.

Their comments were echoed in a second article by two lecturers in education at La Trobe, Barry Sheehan and Jan Branson. Senator Ryan offered a third attack in *The View from Canberra*.

"How to fail at education statistics", delivered a sharp response to almost every assertion made by James and Manne. The writers said: "What they claim to be a trend is no such thing but rather a development specific to the department of politics."

They said that while pass rates had declined, to varying extents in different departments, the main reason was that more students were now withdrawing. But the main reasons for withdrawal were not related to problems of coping with courses, but of coping with personal, domestic, medical, financial and employment problems.

In her article, Senator Ryan said she remained unconvinced that there had been any overall decline in the level of achievement at universities. She rejected suggestions that the government had proposed that students without the intellectual capacity should undertake higher education.

South African protest goes into second year

from E. Patrick McQuaid

CAMBRIDGE, Mass.

Students at Harvard University who last year mounted a new fiscal strategy toward divestiture of university stocks in corporations not adhering to human rights principles in South Africa, this month held a subdued celebration to kick off their second annual fund drive.

Known as the endowment for divestiture, the funds are being collected and held until Harvard divests itself entirely of its South African-related stocks - a sum swarming between \$410m and \$430m. It is to be donated directly to the undergraduate college's scholarship fund. If the university does not divest within the next 20 years, say organizers, the endowment will go to "a socially responsible charity in the Harvard community." Interest earned on the endowment while in escrow is being used to sponsor lectures on issues of moral and ethical concern regarding the South African situation.

Radcliffe College, formerly Harvard's sister institution for women and now part of the coeducational system, still holds a separate portfolio. Students are planning a similar drive to pressure Radcliffe to divest as well. Each spring, undergraduates are asked to donate money toward a "senior gift". Time was when the gift would go toward the purchase of art

work, a bench, building restoration, etc., with a plaque identifying the class as benefactor. In recent years, though, the gift has been directed toward more practical as well as symbolic ends, such as scholarships named in memory of deceased colleagues.

Last year, however, with the endowment's inception, donations to the traditional class gift dropped by 22 per cent (from 79 per cent of all graduates in 1982 to 57 per cent in 1983).

University representatives say decreased participation in last year's class gift was due mainly to confusion and "the fact that people were uninformed" rather than the endowment's initiatives.

Campaign literature for the endowment claims that members of Harvard's corporate governing board, which handles the portfolio, have stated that "morally cannot be a consideration" in investment strategy. University officials don't recall such remarks.

Endowment representatives say the fund is "a gesture" and admit its fiscal power will not replenish capital losses from divestiture. "The endowment for divestiture is a way to contribute to Harvard while demonstrating disapproval of the Harvard corporation's investment policies in South Africa. It is a gift with a moral message," say organizers.

Argentinian student union emerges from underground

by David Jobbins

The Argentinian student movement is beginning to come out into the open after years of underground activity during the rule of the military junta. FUA, representing students at Argentina's 17 universities, holds its annual conference in public next month after operating clandestinely prior to the election of a democratic government and the return to normality.

Although declared unlawful by the junta, FUA began to take a more public profile in 1982 during the popular demonstrations of support for the country's territorial claims to the Falklands.

Backed by radicals, Peronists, Communists and other political groups previously outlawed by the junta, FUA continues to support Argentina's claim to the islands, and according to its leaders, many Argentinian students volunteered for service in the conflict.

Although hostilities have not formally ended, contacts have now been established between FUA and the



British National Union of Students. Representatives from the two organizations met during the International Union of Students conference in Bulgaria, which the British were attending as observers, in talks which are believed to be the first non-church contacts between the two countries since the fighting.

Texas strikes it rich

The University of Texas plans to pull its science and engineering schools up by the bootstraps and has earmarked \$32m to get a jump start. Half of the funds derive from private and corporate gifts, with half of that coming from a single, anonymous donor.

According to President Peter Flawn, the secret benefactor gave the \$3m to make "a positive impact" while not a graduate of the university, the donor's

wife is an alumna.

Mr Flawn said that 32 new chairs will be endowed with salaries of more than \$100,000 each. Informal panels will ferret out candidates and offer them "custom-built" enticements of wages, benefits, equipment and assistants. "We will assemble here a group of very talented people," he continued, "and support them and get out of their way."

Cut in animal research

from Barbara von Ow

MUNICH

Animal experiments, which have come under increasing public criticism in West Germany during recent months, are to be cut by half under a draft law submitted by agriculture minister Ignatz Kiechle earlier this month.

The draft, an amendment of the 1972 animal protection law, was to have passed the Bonn cabinet earlier this month. But the bill drew massive protests, including a rally by 3,000 members of the Federation of Opponents of Animal Testing, who attacked the draft as a "licence to animal torture" which protected animal testing and not the animal.

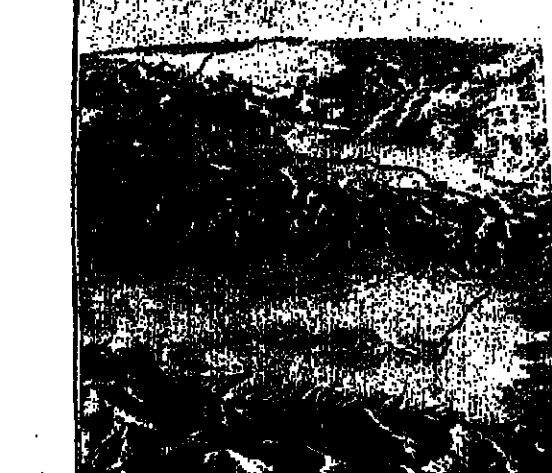
Yielding to public pressure, Kiechle revised the draft to introduce independent expert commissions. Such commissions, made up of doctors, theologians and lawyers have been a longstanding demand by the animal protection lobby.

Despite recent restrictions, some three million animals - mainly mice, rats, dogs and monkeys - are still being used annually for scientific experiments, according to ministry figures. While most experiments are used for drug tests, some 30,000 animals are estimated to be used for tests in the cosmetic industry.

At a recent public hearing by the Social Democrat opposition party (SPD), former research minister Volker Hauff called for a European initiative for protecting animals from needless pain and suffering to supplement national measures by individual EEC countries.

While animal welfare campaigners called for an end to all animal testing, representatives of science and industry stressed that it would be possible to give up such experiments altogether. Scientists have made significant efforts to substitute animal tests by alternative methods, a spokesman for the Max-Planck-Society said only 5 to 10 per cent of all research activities at West Germany's largest scientific organization implied animal tests. However, these still claimed an annual toll of 19,000 animals, he admitted.

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Limits behind the multiple choice

from Bernard Kennedy

ANKARA Monday morning in Ankara. The buses and minibuses are crammed with people and umbrellas. Thousands of cars from the concrete suburb converge slowly on the concrete city centre.

Here and there, large groups of young people can be seen gathering outside grey concrete school buildings. For them, this is not just another Monday morning, but the day of the university entrance exam (part one). By midday they will have struggled with almost 200 multiple choice questions covering everything from chemistry to Turkish history. Some will be well on the way to a university place; others condemned to an unsatisfactory job or at least to another year of book-learning.

In all 437,000 candidates are taking the exam in 20,000 rooms and 1,500 buildings situated in 46 cities (45 in Turkey and one in Cyprus). Half of the examinees will be called to part two of the test, a similar ordeal

scheduled for June.

It would be fanciful to suggest that the rustling of question papers can be heard throughout Turkey this morning, but there can be few who are unaware that the test is taking place. Bus services are closed for the day and the newspapers have been running advice columns and front-page features for days.

From these, we have learned exactly how many questions must be answered correctly, and exactly what should be eaten on the morning of the exam. One national daily even devoted two full pages to a "mock" with the correct answers being published the following day.

But is it all worth it? The second prize consists of a place in the nascent Open University, the reputation of which has yet to be proved on the job market, and which may not even guarantee you a student-rate bus subsidy. First prize is the opportunity to study a subject quite possibly not of your own choosing at a university perhaps not of your own choosing. The opportunity to study the same facts

and take more examinations at an institution reduced, according to its critics, to little more than a primary school for older people.

This morning, however, few are thinking about these minor problems. Some of the 38,000 eventual first-prize winners may already be wondering how their parents are going to pay the new fees. But none seem very worried about giving up their right to join a political party for a few years.

Over 1,000 teaching staff have left the universities because they are unhappy with the limits the Higher Education Council has imposed on courses or research - or simply because they have been sacked by newly-appointed administrators - that can hardly be expected to concern the 18-year-olds biting their fingernails today. If secret files are being kept on all teaching staff, that will prevent this morning's winners from getting better jobs than the morning's losers - which after all is what it's all about.

How much do polys really cost?

Karen Gold looks at the latest figures for the polytechnics

Polytechnic finance officers are into fourth gear: their 1981/82 statistics were published only last autumn; now they have brought out the 1982/83 figures. By next year they will be telling polytechnics how much they have spent before they spend it - which may not be such a bad idea.

Their 85 pages of comparative statistics make interesting reading both by themselves and in conjunction with some Committee of Directors of Polytechnics figures on comparative grant allocations for polytechnics and universities (see table 1).

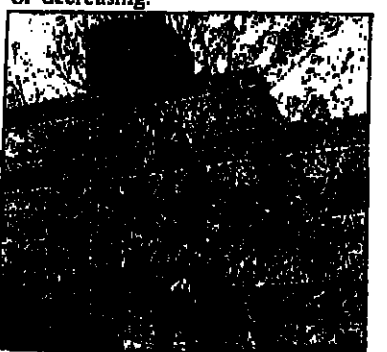
The groupings of universities at the top and polytechnics at the bottom of that funding table - which is taken to the universities in its exclusion of high-cost medical schools - is only the simplest evidence for the public sector's protest that it is discriminated against.

The figures show that only five universities are funded on a per capita basis lower than the best-funded polytechnics - Essex, Exeter, Keele, Kent and Hull - while the gap between the highest funded university, City, and the highest funded polytechnic, North East London, is £1,450 per student. The gap between the lowest funded university, Hull, and the lowest funded polytechnic, Manchester, is £400 per student.

The comparison between the amount of laboratory-based work is also worth making: all five cheapest universities have considerably less science (no more than 35 per cent and mainly 25 per cent) than the best-funded polytechnics, who have at least

45 per cent and up to 60 per cent. Halfway down the polytechnic grouping is Liverpool with 60 per cent science, costing £2,350 per head. Halfway up the university grouping is Bradford, with 60 per cent science costing £3,150 per head. No polytechnic has as little science as the three universities costing more with only 25 per cent.

There is a sizeable gap between the grant funding and the actual cost to institutions per student - unit cost - which takes into account all the institution's income and expenditure. Hence the differences between table 1 and the unit costs in table 2 (see below), which shows not only the relative costs of all the polytechnics, but also their expenditure, numbers, and whether the pattern of their unit costs is increasing or decreasing.



Manchester: lowest funded poly

There are quite a number of changes from the previous year. NELP is still at the top of the list, with the gap between it and its nearest cost rival slightly increased. Brighton has moved up one place to second, while Kingston, which was second, has dropped sharply to thirteenth. South Bank has leapt up the cost league from eighth to third; replacing North Staffs which has gone down to eleventh.

In 1981/82 there were no figures for Oxford and Newcastle; here they are respectively in the middle. The cheapest polytechnic remains City of London, while the one above it, Central London, reduced its costs enormously in 1982 to fall from tenth to thirteenth.

The table also shows the changes in unit cost. Costs increased in 19 institutions and fell in 10. By far the biggest change was PCL, whose cost per full time equivalent student fell by an extraordinary £705. Others with substantial falls were Kingston £469; Bristol £167 and North Staffs £163.

Of those whose costs increased, the most were PCL and Coventry increased £241 and £233; then came Trent £203, Manchester £193 and Wolverhampton £163.

For the first time the finance officers group asked for information on income generated by the institutions, and its source. The figures they received are not particularly enlightening, and in some cases downright quirky: it is impossible to believe that four out of the five inner London polytechnics earned nothing for con-

sultancy for example.

According to the figures there, Sheffield earned most for consultancy with £59,000, and Coventry was the only other one to show a substantial sum with £30,000. Many show none at all. Similarly some show generating sizeable amounts for rents and lettings are predictable - for example Hatfield with £118,000, Middlesex with £120,000 and Bristol with £430,000, almost three times the earnings of anyone else - whereas others showing nothing, such as Oxford and Coventry, would be expected to appear.

The figures for externally funded research show the biggest earner to be Portsmouth with £803,000 followed by PCL with £763,000, Hatfield with £745,000 and Leicester with £548,000. Those earning the least were Kingston with £99,000 and North Staffs with £81,000.

Comparative costs per department were collected for the first time in the 1981/82 figures. The latest set shows quite a number of changes, but also several gaps where polytechnics giving figures last year have not given them this year. In a number of cases they were the most costly in 1981/82.

In medicine and health, Sunderland has overtaken Teesside as the most expensive while Manchester is still the cheapest. In engineering City of London is still by far the most expensive and Manchester still the cheapest. In other technologies North Staffs has moved from third to most expensive, Brighton is down from first to sixth and Hatfield stays cheapest.

In biological and physical sciences and catering management, PNL which was most expensive last year is not included this year. The dearest in the former is now Brighton, in the latter Ulster. Similarly in architecture and planning PCL, the most expensive last year, does not appear; Trent is now at the top.

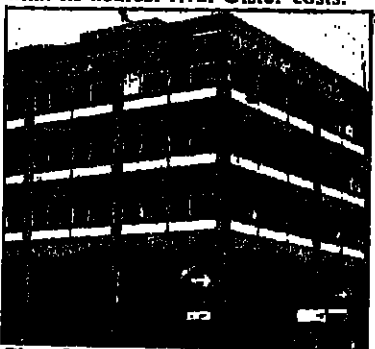
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City of London: expensive engineers

The administrative costs show central administration most expensive in Ulster and Middlesex, least in City of London and Wales, though many institutions are not given. Premises and grounds cost most in Huddersfield, £517 per head, least in Bristol, £266 per head, while Brighton spends most for non-teaching services £381 per head, and PCL least with £133 per head.

Brighton still spends far more than any other polytechnic on learning resources staff - £1,171, with the next nearest Middlesex with £797,000 - and Brighton spends most on learning resources supplies and services too: £813,000.

Polytechnic Expenditure 1982/83, by the Polytechnic Finance Officers Group, £11, available from The Bureau, Brighton Polytechnic.

Table 1 - Estimated per capita funding for English universities without medical schools, and for polytechnics.

University/ Polytechnic	UGC grant/ NAB allocation	Estimated student FTE/ target home student FTE	Per capita funding	% Science/ laboratory-based work
City U	£11.0M	2500	£4400	70%
Brunel U	£12.3M	3000	£4100	65%
UMIST U	£15.3M	3850	£4000	75%
Surrey U	£12.2M	3150	£3900	75%
Bath U	£12.3M	3400	£3800	70%
Durham U	£16.6M	4850	£3550	35%
Aston U	£13.9M	4100	£3400	70%
East Anglia U	£13.8M	4050	£3400	30%
Reading U	£17.9M	4350	£3350	50%
Sussex U	£13.2M	4000	£3300	35%
Loughborough U	£17.2M	5350	£3200	55%
Bradford U	£13.8M	4400	£3150	60%
Warwick U	£16.3M	5200	£3150	30%
Salford U	£12.0M	3950	£3100	75%
York U	£10.4M	3400	£3050	35%
Lancaster U	£12.6M	4350	£2950	25%
NE London P	£15.6M	5300	£2950	45%
Essex U	£7.8M	2700	£2900	35%
Exeter U	£14.8M	5150	£2850	30%
Keele U	£8.0M	2850	£2800	30%
South Bank P	£14.3M	5300	£2700	60%
Thames P	£9.0M	3400	£2650	60%
Central London P	£11.2M	4300	£2600	45%
Kent U	£9.8M	3800	£2600	25%
Hatfield P	£11.9M	4700	£2550	65%
Coventry P	£13.8M	5400	£2550	85%
Portsmouth P	£15.5M	6200	£2500	55%
Hull U	£13.5M	5400	£2500	25%
Brighton P	£12.0M	5250	£2450	50%
Sunderland P	£10.0M	4100	£2450	60%
Leicester P	£16.1M	6800	£2450	55%
Kingston P	£13.2M	5500	£2400	45%
North London P	£11.2M	4700	£2400	30%
Sheffield P	£19.4M	8150	£2400	40%
Liverpool P	£17.8M	7650	£2350	60%
Trent P	£18.2M	7800	£2350	55%
Oxford P	£9.9M	4250	£2350	55%
Preston P	£10.3M	4500	£2300	50%
Middlesex P	£18.0M	7000	£2300	35%
Wolverhampton P	£12.4M	5400	£2300	35%
Leeds P	£14.7M	6450	£2250	45%
Huddersfield P	£10.8M	4800	£2250	35%
Birmingham P	£13.1M	5800	£2250	60%
Plymouth P	£10.4M	4600	£2250	65%
City of London P	£8.8M	3900	£2250	35%
Teesside P	£8.1M	3800	£2250	50%
Newcastle P	£15.8M	7100	£2200	40%
North Staffs P	£11.3M	5200	£2200	45%
Bristol P	£13.9M	6450	£2150	40%
Manchester P	£21.9M	10500	£2100	40%
Average		U 4000 P 5850	U £3250 P £2425	U 45% P 50%

(Statistics collected by the Committee of Directors of Polytechnics. U=University; P=polytechnic)

Chorus for a generation

William Empson profoundly affected our perceptions of poetic meaning. His *Seven Types of Ambiguity* (1930 and 1947) added a new dimension to literary language; from then on, no poem could be entirely serious if it was not also 'ambiguous'.

There are sufficient ambiguities in Empson's own life and career. It was a complex figure; often difficult, frequently warring; capable of great savagery; as in his attack on Christianity in *Milton's God* (1965) - he could be generous with praise and encouragement. His poems are sometimes felt to be excessively esoteric and intellectual; yet they can also be passionate, lyrical, even incantatory. Phrases like "learn a style from despair", "the waste remains and kills" are endlessly memorable. "Waiting for the end, boys", from *Just a Smack at Auden* became the chorus for a generation (and, incidentally, the title of American critic Leslie Fiedler's apocalyptic study of modern literature). In his critical work, Empson could be slapdash and intuitive to the point of solipsism; yet he was also profoundly serious and self-critical, revising both *Seven Types of Ambiguity* and *Milton's God*, not to catch another generation of textbook sales but because he was insufficiently in his grasp.

If there is a meaningful distinction between scholarly and intellectual approaches to literature, it seems to be the intellectual's need to theorize more or less directly from personal experience, to totalize ideas in a way that lends them an organic shape. Empson lacked the scholar's discipline but he also avoided the kind of ideological absolutism which was not uncommon among his contemporaries.

Fiedler's respectful appropriation of Empson's most famous verse suggests some of the difficulty of locating his position. Conventionally, Empson is seen as an English 'War Critic', part of the movement which fostered "words on the page" criticism. Empson was a classic British sceptic in his resolute refusal to multiply concepts unnecessarily; he was suspicious of transcendence of any sort; poetry was an affair of printed words, not of biographical speculation, political or social analysis or religious uplift.

If Empson (the poet, rather than the critic) fuelled Leslie Fiedler's chthonic, psychoanalytic view of literary culture and helped naturalize in Britain the principles of New Criticism, his Marxist bent and his concern with systems of meaning suggested him as an acceptable ancestor for semiology and structuralism.

Empson shared many characteristics with the late G. S. Fraser. Both returned to England from the Far East with ears newly attuned to the sound of English. Both withdrew from the orthodox mainstream of academic literary study, Fraser to Leicester, Empson to the University of Sheffield, where he held the chair of English from 1953 to 1971. Like Fraser, but from a different point on the scale, he suffered a sense of class unease, he was born in Yorkshire, in an upper-class family at Howden.

Sir William Empson (he was knighted in 1979) died, aged 77, on April 15. His last years had been difficult ones. The battle with illness brought no recantation, no sudden burst of religiosity. Empson brought to his verse a muscular brand of self-struggle reminiscent of Donne and Herbert but other than the usual doctrinal belief other than the conviction that the social order was unjust and had to be changed. For a poet this is the greatest perception and the worst frustration, the "last palm", "Imagine, then, by which you, me, (Ambiguous gifts, as mine go, What could not possibly be then And learn a style from a despair."

Brian Morton

Paul Flather meets the monetarist professor with a radical prescription for the 'British disease'

A dose of market forces

Liverpool appears to be a most unexpected place to find one of the country's leading monetarists who has just opened a programme called for the power of the free market. Traditional Keynesian public spending seems to be what this once great city needs badly. Professor Patrick Minford laughs. "No, I think Liverpool's experience actually proves my point that market forces are what matters."

Merseyside, he argues, is an extreme version of the "British disease" caused by too generous a benefits system, and too powerful trade unions. The argument runs like this: the benefits structure prevents wages falling below a certain wage floor, at which point people are just not prepared to work for lower wages. If only they continued to fall, companies could afford to take on more workers. Thus, it is argued, high benefits and trade unions create unemployment, aided and abetted by a tax structure that acts as a disincentive to low paid people to search for jobs.

The Liverpool story is outlined in more detail in the latest *Quarterly Economic Bulletin* produced by Professor Minford's research group in macroeconomics. An article in the bulletin dismisses current remedies to the area's problems (more than 150,000 or one in five are out of work) including the Spoke benefits and trade unions, create unemployment, aided and abetted by a tax structure that acts as a disincentive to low paid people to search for jobs.

Universities, he argues, should be free to fix their own fees and to advertise while students would have to pay their own way with loans and earnings from holiday work. As higher education yields a return to graduates able to sell their skills in the market place, there is no case for any state subsidy. By competing on price universities would be forced to lower costs, increase efficiency and improve the allocation of resources between subjects. Students would also work harder knowing that their own resources were at stake.

But even Professor Minford concedes that not everything could be left to the market. There may well be problems such as the demise of prestige subjects such as classics or English literature, or the poor discouraged from sending their children to university. He would expect the "profit-earning" vocational subjects such as law to cross-subsidize the prestige subjects, but he does say it would be perfectly in order to have a specially targeted state subsidy to help to solve such problems.

So the state would still retain a crucial role under the Minford scheme which overall promises to reduce public expenditure by £43 billion by 1990, by the privatization of all state education.

Thirty-five million pounds will buy you a fighter plane or two, a clutch of opera and theatre companies, a million-over subscriptions to *The Times* or cover one year's British contribution to particle physics research at CERN. The annual payment to CERN, the European Centre for Nuclear Research in Geneva, is the largest single item in the country's civil science budget, accounting for 12.7 per cent of the expenditure of the Science and Engineering Research Council.

The announcement last month that the SERC and the Advisory Board for the Research Councils are to conduct an inquiry into British support for particle physics follows a period of growing tension between different groups of scientists over the burden of the CERN subscription when Sterling exchange rates are slipping and many university researchers in other fields are being refused grants.

It will evoke a full airing of the arguments against high energy physics - arguments like this: "Nuclear physics is only a part of science, although it accounts for a disproportionate amount of our total expenditure on scientific research. It is much more expensive than most other types of scientific work but... our expenditure on the rest of science is too low. There is a widespread feeling of discontent among academic scientists at this state of affairs, and an impression that nuclear physics is getting a very large slice of a rather small cake, despite the fact that the results to be obtained from it are likely to be of much less immediate practical importance than those from many other types of research."

The quote neatly sums up current views on one side, but it comes from a report of the Advisory Council on Science, Policy, over 20 years ago. According to Dr Philip Gummert, a lecturer in science policy at Manchester University who has written the history of the SERC, the CERN physicists' position led the CERN physicists

disputes. Shortly before last year's general election he openly encouraged readers of his *Quarterly* to vote for Mrs Thatcher if they wanted an economic upturn, breaking all academic taboos which require a reader to draw his or her own conclusions from the evidence. No one however wanted a slanging match and the expected row was quickly defused.

Last week Professor Minford presented his latest contribution to the public arena, a 25,000 word essay, *State expenditure: a study in waste*, published by the strongly pro-market Institute of Economic Affairs to a gathering in a Commons committee room. He did so as if the ideas were the most natural in the world and if only the Government would follow through the open door, it would "save" £43 billion by 1990. Yet his paper would turn the clock back 100 years, effectively privatizing the Welfare State and trade consumers to pick schools and doctors like they currently pick soap powder.

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Jon Turney analyses the background behind the inquiry into British support for particle physics research

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The high energy debate

hots up

of the time to dub it the "Association of Chemists for the Suppression of Physics". Ever since then particle physics, and especially the cost of CERN, has been the hottest issue in British science policy. So it is no surprise that budget pressures have again prompted official soul-searching about this most esoteric field.

The cost and the international connections involved mean it is also the field which has tested the limits of scientific advisors' influence on politicians' decisions, as the new inquiry is likely to show again. This is clearly illustrated by the tangled history of the large atom smasher built at CERN in the 1970s, the Super Proton Synchrotron, or SPSS.

It was this machine the Advisory Council on Science Policy was considering in 1963, 10 years after 12 European countries signed the original CERN convention. An ACSP committee under Professor Brian Flowers (now Lord Flowers, chairman of the Committee of Vice-Chancellors and Principals) had recommended British approval for the new machine, then planned to be 10 times as powerful as the existing CERN particle accelerator. But the council was uncertain it could afford it.

After the 1964 general election, the Labour government set up a new Council for Scientific Policy to preside over the five research councils and

THE MINFORD SAVINGS

by 1990

	£ billion
Health	8.0
Education	16.0
Pensions	3.2
Unemployment benefits	1.0
Personal social services	0.8
Nationalized industries	2.0
Industry, etc	4.3
Housing	4.1
Transport	0.5
Agriculture	1.0
Defence	2.0
Environment	1.2
Other government programmes	1.0
Total programmes	42.9

Source: *State Expenditure: A Study in Waste* from the Institute of Economic Affairs, 2 or North Street, London SW1.

tion, a system of health insurance, selling off state assets including all nationalized industries, lowering benefits and reducing defence spending. The state would have to administer public goods such as law and order, and defence, and it would have the job of redistributing funds to the poor through a negative income tax which would allow consumers to spend their money as they wish, thereby helping to maximize efficiency. Three exceptions would be that everyone would have to join a pensions scheme, produce school education receipts, and take out medical insurance.

Perhaps the most significant point about the Minford plan, which has already drawn fire from his critics, is that it was published at all. It comes at a time when the Government has publicly announced a series of reviews of the social security system and is trying to stimulate debate about future public expenditure. Its timing, and Professor Minford's status as an occasional adviser to the Prime Minister, are bound to fuel fears that there is in the pipeline, a major assault on the welfare state.

Professor Minford himself first came under the spell of the so-called monetarist counter-revolution in the 1960s when he studied under Harry Johnson and with Alan Walters at the London



Patrick Minford: rather cavalier?

School of Economics, after a first degree at Balliol College, Oxford. He spent a couple of years in the finance ministry in Malawi, where, he says: "the scales fell from my eyes". He saw men willing to travel thousands of miles to find lucrative posts in the South African mines, an influence not exactly relevant to Britain. He moved to the Treasury working in the foreign exchange section during the agonizing which led to the floating of the pound in 1972. He then spent a year in Washington where the monetarist revolution spawned by the work of Milton Friedman and the Chicago school of economists had really taken hold before moving to Manchester for a year.

Here he came into contact with two well-known British monetarists, David Laidler and Michael Parkin, running a project known as the Inflation Workshop. He spent a year at the National Institute of Economic and Social Research as its Review editor, a generally Keynesian set-up, before at the age of 33 being appointed as professor of economics at Liverpool University. There he set up his research group with Mr Kent Matthews and Mr David

Peel, himself just appointed to a chair at Aberystwyth. They developed their own model based on the "rational expectations" hypothesis.

There was great head-shaking in economic circles when the group was awarded £65,000 a year between 1983 and 1987 from the Economic and Social Research Council, coinciding as it did with cuts in grants to leading Keynesian forecasting groups. It fuelled rumours that the ESRC was being deliberately pro-monetarist to help fend off the critical Government scrutiny it was then under.

The Minford view, explained in two books he has jointly written, *Rational Expectations and the New Macro Economics* and *Unemployment: cause and cure*, is based on the assumption that all the economic markets will "clear" or come into equilibrium if only state and monopoly interference were removed. His cure for unemployment would mean curbing unions, reforming wage councils, and cutting benefits. But as a *THES* reviewer commented last year: "I am sure Minford has his heart in the right place but his vision is extraordinarily narrow and the underlying theoretical model... leaves much to be desired." The big flaw, his critics say, is that in the end demand must still be given a boost before jobs are created.

In fact his Liverpool model has predicted better than any other how quickly inflation would drop and picked up the signs of the recent upturn first. It has been far less successful in predicting growth and output. As he writes in the publicly material he sends to prospective clients for the Liverpool work: "Not everyone agrees with (rational expectations) but they cannot ignore it." With further forecasts that the current domestic growth is likely to be sustained over three to four years, that unemployment will begin to fall off in 1985, and that inflation should fall below 1 per cent by 1986, it is no surprise that the good professor has his patrons in high places.

Professor Minford, now 40, is described by fellow economists as rather cavalier and as someone who comes to his model building armed with very strong beliefs. But most agree that his work has thrown up some useful insights on how money markets work. He remains an extremely likeable man, and as a senior economist put it: "Whatever one's views, there is no doubt Patrick's work deserves to be taken seriously."



The underground proton synchrotron at CERN

both this Council and the new Science Research Council backed the CERN plan. But the old tensions were still there. Two SRC members dissented from the positive recommendation, arguing the money would be better spent elsewhere. The government eventually sided with the dissenters and Brian Flowers, by now chairman of the SRC, told the CERN council in April 1968 that Britain would not take part in the new project.

Flowers stressed that the decision went against his wishes, and it was clear he had worked hard behind the scenes to win Cabinet backing. But the cost of the project, which was likely to increase, and the absence of any economic return counted against the physicists. He might have added that the "devolution" of the "pound" the previous Winter did not help.

However, all was not lost. Come 1970 and a new Conservative Government brought Mrs Margaret Thatcher to the DES. She visited CERN, was impressed and encouraged the physicists to revive their proposals. This, combined with a modified, and cheaper, design was enough to see the project through. Britain signed the amended CERN agreement in 1971.

Mrs Thatcher, as Prime Minister, has now approved the new inquiry into CERN membership, but the Government had emphasized that there is no guarantee it will act on the review group's findings. Sir Keith Joseph, the present secretary of state at the DES, has promised the ABRC that if it stops payment to CERN it can keep the money. But he also reminded the board that the final decision on membership of an international organization must rest with the Cabinet.

So the five people who have agreed to join the group have the authority

BUSINESS AND TECHNICIAN EDUCATION

On 2nd March this year, *The Times Higher Education Supplement* published an 8 page feature on business and technician education. Among the contributors to this report are Mr H. N. Raine, Chairman of the Business and Technician Education Council, Sir Robert Telford, Chairman of Marconi, and Dr George Tolley, newly appointed Head of Quality at the Manpower Services Commission.

This feature is now available in reprint form price 80p. To obtain your copy please send a cheque/postal order (no cash please) made payable to *Times Newspapers Limited*, to:

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Working 'up to your knees in mud'

Jon Turney talks to Francesca Bray, author of the volume on agriculture in *Science and Civilization in China*

There is nothing else in British scholarship like *Science and Civilization in China*. No other work on the history of science rivals this project in span of time, place or subject matter. So say the reviewers, whose favourite adjective is "monumental".

And there is no one else like Joseph Needham, whose remarkable career generally attracts as many superlatives as the successive volumes of *Science and Civilization* he and a small band of collaborators have laboured over these past 40 years. The Cambridge biochemist, essayist and historian of embryology of the 1920s and 1930s is now feted as the architect of this prodigious effort to chart the course of science and technology in the East - part homage to one of the world's great civilizations, part inquiry in comparative intellectual history.

So it must have been a daunting prospect to be invited to write the first volume in the series which does not bear Needham's name as author. Small wonder that it took Francesca Bray eight years to write her volume on the history of Chinese agriculture (Volume six, part two in the series) which is published this month. Happily, it looks like being an important volume for the work as a whole, largely because the interaction between ideas and social and economic life which is Needham's leading theme is especially direct in the arts of husbandry and cultivation. As Bray writes, "agriculture is *par excellence* the technological system which mediates between nature and society".

She had come to work on *Science and Civilization in China* after graduating in Chinese, although she originally came up to Cambridge to read sciences. There was too much ground to make up between her French secondary education and the Cambridge science tripos, she found, and she changed after her first year, "to my tutor's evident relief". What to do with a degree in Chinese? The Foreign Office seemed unpromising for a woman and further Chinese studies too much of a good thing. Someone suggested her acquaintance with science as well as ideographic languages might commend her to Needham. She has been working on the project ever since, first as a research assistant, now as a fellow in the East Asian History of Science Library.

The history of food production in China is recorded in a sequence of agricultural treatises and monographs which stretches back over two millennia. So when Francesca Bray came to work with Needham in the 1970s - then running the project from various corners of the Master's Lodge in Gonville and Caius College, Cambridge - she began, logically enough, by translating a leading Chinese treatise. This gave her a pattern which stayed with her throughout the same framework - a tradition so venerable it is hard to believe it was not all pouring over texts and searching for telling illustrations. One advantage of studying a technology is that the historian can get a feel for its texture by trying some of the techniques. This Bray did during a year's sabbatical in Malaysia studying peasant rice cultivation. She was determined not to fall into the trap of reading too much about Chinese, an error she finds Chinese scholars are prone to. But the field trip was vital "because you need to know what it's like to work up to your knees in mud in a paddy field".

In the event, she was guarded about being unduly influenced by present-day agriculture by what she found in Malaysia. Travel to China was ruled out at the time because of the aftermath of the Cultural Revolution, so Bray chose a remote part of East Asia where rice production would be relatively traditional. But she found farmers there in the throes of far-reaching change themselves - in the "Green Revolution" of new varieties, pesticides and fertilizers which swept many rice-growing areas in the 1960s and 1970s.

But observing this complex of technological, social and economic changes at close quarters also had its uses, both for getting a feel for the way agriculture meshes with other activities and, more unexpectedly, because study of Chinese history reveals a much earlier green revolution.

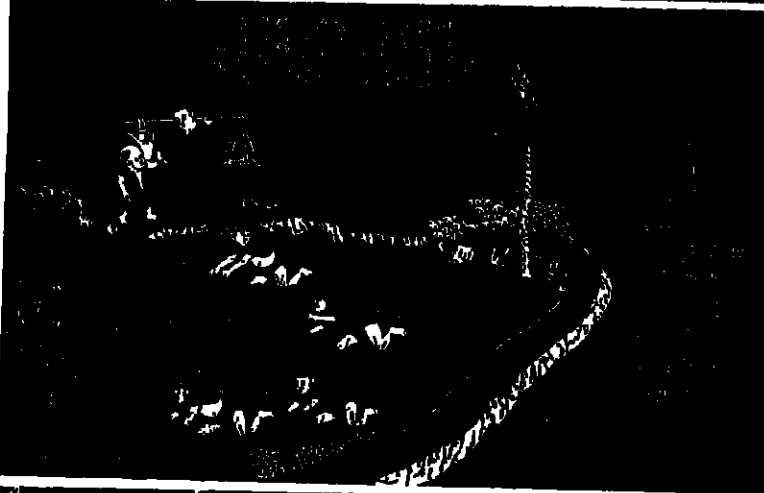
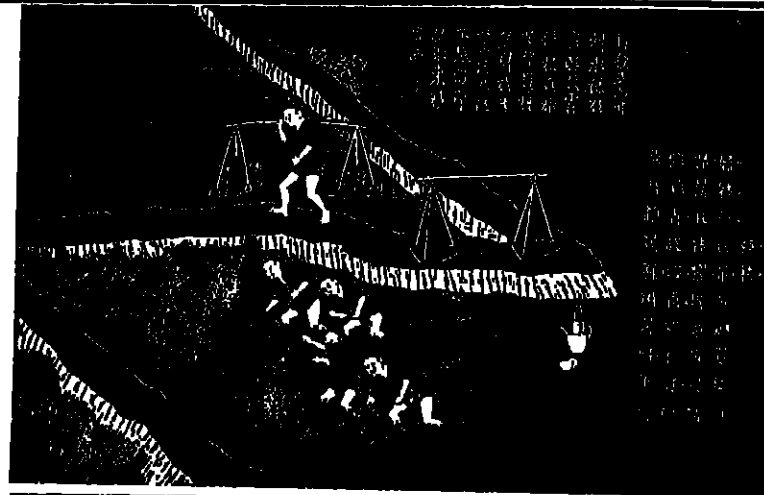
The parallel has been drawn before, but Bray can show a remarkably close analogy between the "package" of reforms instituted at the behest of Western development agencies in recent decades and government inspired programmes of the Sung dynasty in 11th century China. Faced with a large and hungry population following wars and migrations from Northern China, the Sung administration in the south boosted rice production with fast-ripening varieties, instructions in irrigation and double-cropping, cheap loans and favourable tax policies.

The history of initiatives like this shows both the remarkable sophistication of the Chinese bureaucracy and the importance of agriculture in the economy. And the technical prowess needed for this kind of planning also demonstrated in other agricultural developments of equal antiquity, casts new light on the central inquiry of *Science and Civilization in China*.

At the heart of Needham's project lies a single guiding question: why did the intellectual revolution which gave rise to modern science occur in Europe, not in the East? Bray's own discussion of the economic constraints of rice cultivation touches directly on this issue in a way Needham has often elaborated. For the rise of modern science is intimately bound up with the social and economic changes which brought about an agricultural, then an industrial revolution in Europe, changes which marked the transition from feudal to capitalist society.

Francesca Bray's exploration of Chinese farming and cultivation leads to a shift in the central question, again very similar to Needham's reformulation after establishing the innovative richness of Chinese science; since it seems that many Chinese innovations helped stimulate rapid economic and social change in Europe, why did they not have the same effect in China?

The question has force because of the potency of the inventions first made in China. Needham's writing has made them familiar: printing and the compass; gunpowder and rockets; the seed drill and modern plough. To this list Bray adds, for example, the seed drill and modern plough. Following earlier students of Chinese husbandry, this makes a strong case for the influence on European versions of these implements, direct in the case of the plough and indirect for the drill. Effective seed drills were first designed in Europe, soon after accounts of Chinese farming methods reached the West, though they bore little resemblance to their oriental counterparts. Here Bray as a historian of technology argues there was "stimulus diffusion" following the general assumption of Needham's work that this sort of thing is unlikely to be pure coincidence. She admits that her presentation of the case was "a bit black and white, but I wanted to see how people would



These illustrations of Chinese agriculture are taken from the *Small World* version of the *Kong Chih Thu* (Agriculture and Sericulture Illustrated) and may be copied from the Sung (12th century) originals.

But these were precisely the innovations which underpinned the agricultural revolution in seventeenth century Europe. If Bray's case holds water, the progress-oriented European wants to know why nothing of this kind happened in China.

Her answer is twofold. The first response, incontestable in the face of the accumulated evidence of the whole project, is that there was progress in China. She admits: "I get annoyed when people portray Chinese society as static. There were quite radical changes".

Nevertheless, Chinese society seems to have absorbed technical innovations one by one, where Europe used them to feed a growing hunger for more innovation. That hunger was contagious, and is now felt as keenly in China as anywhere in the world. Can this mean something earlier held it back?

Bray's second response is that the special characteristics of wet-rice cultivation, the predominant type of farming in Southern China, may help account for this. Since the optimum size for a rice plot is only around one sixth of an acre, there is little scope for economies of scale, or a detailed division of labour. In fact, she found that even today, changing traditional patterns of rice cultivation in favour of mechanization tend to reduce yields, at least to start with. The lack of profit from major technical innovation is one powerful reason why the practices developed in South China in the Sung dynasty endured for over 800 years.

The final verdict here will have to wait for volume 7 - or even longer. "Everyone's waiting for volume 7, but it's not going to offer definitive answers". Francesca Bray reckons Joseph Needham himself, still working an eight-hour day on the project at 83, responds mischievously to the risk of journalistic question about an ultimate conclusion: "I think it might be better to finish with no conclusion. That would be the Taoist way".

Not is it clear when a closing

Reading and Derrida

It was unnerving to be reading the first part of David Lodge's novel *Small World* while attending the Higher Education Teachers of English conference at Reading the month. The HETE was on, but which was book and which life? Should one drop out of Reading and keep on reading? If all depends on Deleuze or Derrida, for whom there is nothing outside writing. He dominated the conference.

Catherine Belsey appropriated him for her lecture "Disrupting Difference", humorously declaring her interest as a radical Marxist post-structuralist feminist, at the outset. She used opposing meanings in the images of the family in the sixteenth and seventeenth centuries as a text for "disrupting" Shakespearean texts presented to women. Yet Ann Woodward, female Derridean, did not apparently a radical Marxist feminist, all that Derrida had "unsettled" or notions of history and the dialectic. There's nothing outside language, where is the "matter" for a materialist? We are robbed of our context along with our referents if we defer to Derrida, so can a Marxist like Belsey claim him? Yet though Derrida "unsettles the concepts that we use", Ann Woodward allowed herself to say a quite settled way that Harold Bloom, a Yale revisionist, "reads beautifully". Was this "reads" active or passive? Both surely, and many more, because no reading or meaning is fixed anymore, or authoritative. Or beautiful.

Another contradiction. Deleuze and Derrida was a radical son. Donoghue, a non-Marxist, paradoxically wanted to give Derrida himself a context. In his lecture "The Question of Voice", he placed him ultimately in the Judeo-Christian preserving the primacy of "Scripture or Scripture is Derrida's way of keeping himself out of God's way. It protects himself from direct contact with the authority of the voice and presence of God by finding authority in the sentence - and hanging on to rationality.

But what of rationality? Its centre in what I still laughingly, and metaphorically refer to as my mind, would not hold. I fell apart. What was I? In a post-Marxist, post-Structuralist, post-Feminist world, I was displaced. Perhaps I was in a post-post-Structuralist world - Denis Donoghue has mentioned as the source for his reading of Derrida a book called *Disrupting Derrida and After*. Was this *After*?

But to begin at the beginning. On the first morning, Karl Miller spoke very obliquely about "Leavis and Leavis' Pupils". "Remind me, he said he'd be, and this seemed 'essential'. Yet the ostensible subject of his lecture was an American poet of the late nineteenth century, not Leavis, Marjorie Blevins, who seemed tangential. At the end, however, the lecture revealed itself to have been subtly concerned with British and American cultural difference, and the dialectic of Leavis' important dualism, which has, best, to be regarded ambivalently.

Liveliness broke out after David Crystal's lecture "Fashion in Language and Literature". He had argued equality legislation as an aspect of social and linguistic change, and the mass media and technology as accelerators of this change. Yet his own pronouns and metaphors, swirling from the dead particularly in the context of change, remained centred in an exclusively male's world. Crystal, he felt back on his normalizing first 12 years when he had to learn linguistic habits as fixed. Even faint-hearted feminists were offended, but he wouldn't defer to "fashions", preferring apparently to defer to change. Vive la difference! Vive la conference!

Leonie Lichtenstein

The author is senior lecturer in English at Goldsmiths College.

Anne Cranny-Francis looks at the work of William Morris - socialist, poet and master craftsman

From practical to political

The legacy of William Morris's work has proved to be as diverse and robust as the man himself. Figures as various as Raymond Williams, Tony Benn, art critic Ray Wilkinson, designer Theo Crosby, environmentalist Tom Burke and architect David Lea have recently contributed to the major re-assessment inspired by Morris's 150th anniversary. Political and social theorists like Williams and Benn have found Morris's socialist writings and the story of his political involvements a major source of inspiration. To the majority, though, he is still best known as leader of the Arts and Crafts movement.

Morris's involvement in the arts began at Oxford where he wrote poetry and short stories for the ephemeral *Oxford and Cambridge Magazine*. Though Morris went on to write some of the most popular (and longest) poems in the English language, he was unimpressed by his own ability, answering an early admirer with the characteristically blunt: "Well, if this is poetry, it is very easy to write".

Nevertheless, poetry, notably the enormously successful *Earthly Paradise*, was the basis of Morris's artistic reputation in the nineteenth century. Many years later, in 1892, Morris was even "sounded" by a member of Gladstone's Cabinet as a possible successor to Tennyson as Poet Laureate. By this time an active socialist, Morris saw his position as both highly privileged and politically unacceptable and laughed at the thought of a "Socialist Court Poet".

Yet even as early as *Earthly Paradise*, published in 1868, a suggestion of some deeper dissatisfaction appears in the "Apology". Morris refers to the narrator as the "idle singer of an empty day", hardly a positive reference either to his art or to the period of Britain's greatest industrial expansion.

Between 1860 and 1865, Morris and his new wife Jane lived at the beautiful Red House at Bexleyheath in Kent. The Red House was built by architect and friend Philip Webb according to Morris's own dictates for an architect's free of neo-classical posturality on the one hand and Victorian Gothic vulgarity on the other. Nikolaus Pevsner noted the building of the Red House as one of the landmarks of British domestic architecture, reviving the "unobtrusive, dignified and comfortable style" of domestic building which had persisted in Britain since the Middle Ages.

There Morris experimented with the design and manufacture of various

branches of what he called the "decorative arts". Morris was particularly interested in textile crafts - the famous wallpapers, chintz, carpet, tapestry, embroidery - and in furniture and tile work.

Out of this study and experimentation, as well as economic necessity, came the Firm - originally a partnership with Morris, Peter Paul Marshall and Charles Faulkner as major financial backers, and with Edward Burne-Jones, Dante Gabriel Rossetti, Ford Madox Brown and Philip Webb as minor members. The Firm's simple and courageous brief was to reform the minor arts, among which they included all kinds of decoration from paintings and murals (especially courageous considering the spectacular failure of Rossetti, Burne-Jones, Morris and friends with the Oxford Union Debating Hall frescoes some years earlier) to the smallest decorative items.

By 1875, the Firm was dogged by internal financial problems and bickering. Dissolution of the partnership was the only practical answer and the Firm reemerged as Morris & Co. with Morris as sole proprietor. Under his direction it established an impressive reputation for all sorts of interior design and manufacturing work. Morris's participation in almost all of its ventures as either designer or manufacturer (often both) easily earned him the appellation "master-craftsman".

But Morris did not just design and manufacture - he also experimented. Unhappy with the fashionable aniline-based dyes, he went back to the old herbals for advice and began to gather natural materials - wood, flowers, insects - with which to make his own dyes. Jack Lindsay, in his biography of Morris, tells the favourite story of a friend who, on inquiring after Morris at the works, heard Morris's cheerful voice from an inner room, "I'm dyeing, I'm dyeing, I'm dyeing". The craftsman emerged, his hands stained blue from the vat.

During this time Morris continued his literary work, writing poetry and translating classical texts such as the *Aeneid*. He also learned Icelandic - both as an aid on his trips to Iceland in 1871 and 1873, and to enable him to read and translate the old saga literature. Illumination was another new

process, which combined his literary and design skills and was probably the genesis of his fascination with printing. This culminated in the 1890s with the establishment of the famous Kelmscott Press and production of the beautiful Kelmscott Chaucer.

By 1877, then, Morris was a very successful man, but increasingly dissatisfied. His research into the arts and crafts had revealed to him the social basis of manufacturing and production processes, a view reinforced by his reading of Ruskin. At the same time

Morris saw an intimate relationship between the poverty and vulgarity of nineteenth century arts and crafts and the dominance of the middle class. His public lectures on art increasingly questioned contemporary work methods. With Ruskin, he criticized the dehumanizing nature of the new mass production processes. Workers, he argued, had been turned into appendages of machines - "hands" - and the machines, instead of being slaves of the workers, had made the workers slaves.

This theoretical social criticism was

soon given a practical test when Morris ventured into public political life.

He began his political career in the Eastern Question, an anti-Israeli, anti-Jingoist movement of 1877. At this time he had great hopes for the Liberal Party. Morris was quickly disillusioned with parliamentary politics, with the compromises and policy reversals, but unlike most disappointed political activists, he did not simply withdraw. He transformed his political thought. If parliamentary politics was corrupt, he would find an alternative.

In the early 1880s, Morris confronted his native English socialism and the social and political insights developed through his aesthetic theory and research with the theoretical writings of Karl Marx, and developed his own understanding of socialism, still firmly based on his practical knowledge of artistic work processes.

Political dissonance within the socialist movement led Morris and several like-minded socialists, Belfort Dax, Edward Aveling, Charles Faulkner and Eleanor Marx, to establish their own group, the Socialist League. For many years, Morris was both treasurer and editor of the League newspaper *Commonweath* in which he published his finest lectures on politics/art/society, socialist poems, his historical romance *A Dream of John Ball*, and his utopian vision *News from Nowhere*, in which he describes the transformation of the corrupt competitive nineteenth century British capitalist state into a peaceful and just communist society in the twenty-first century.

All this time, Morris continued his work for the Firm, branching out into book design and manufacture with the Kelmscott Press. He also wrote more poetry, translated many classical texts, including the *Odyssey* and Germanic and Icelandic sagas, and wrote a number of fantasy novels, many of them still in print: *The Well at the World's End*, *The Wood Beyond the World* and *The Water of the Wondrous Isles*.

Each new artistic pursuit became an occasion for social criticism or socialist propaganda. At the Kelmscott Press, Morris took special pride in printing Ruskin's *The Nature of Gothic* which contains a sustained critique of contemporary work methods. He also published a translation of Thomas More's *Utopia* which Morris regarded as a link between the surviving culture of the Middle Ages and the contemporary socialist movements. His fantasies, too, were based on ideologies and belief systems radically different from, and implicitly critical of, those of nineteenth century Britain.

Since 1877, Morris had also been actively involved in the Society for the Protection of Ancient Buildings which he helped found (and has ever since called "Anti-Square") for the contemporary practice of scraping stone work to make it look new. Like so many other pursuits, the SPAB continued to engage Morris both aesthetically and politically, leading him to examine both the societies which had produced these beautiful old buildings and that which wanted to destroy or vulgarize them. Again and again, Morris found himself in direct opposition to the commercial philistinism of his society. As E. P. Thompson notes in his biography, Morris's work for the SPAB was important in transforming his view of history from passive to active, and inspiring in him a hope for the future which would sustain him through many stormy (politically and personally so) periods to come.

When Morris did in 1896 two different, but not wholly incompatible, diagnoses were given. His family doctor declared that he "died a victim of his enthusiasm for extending the principles of Socialism". Another doctor claimed: "I consider the case is this: the disease is simply being William Morris, and having done more work than most 10 men". Study of Morris's life suggests that both diagnoses are correct.

The cause for which he spent his life is best expressed in one of his *Commonweath* essays: "to leisure which socialism above all aims at obtaining for the worker is also the very thing that breeds desire - desire for beauty, for knowledge, for more abundant life, in short, Once more, that leisure and desire are sure to produce art, and without them nothing but sham art, void of life or reason for existence, can be produced; therefore not only the worker but the world in general will have no share in art till present commercial society gives place to real society - to socialism."

Above: William Morris (right) with Edward Burne-Jones in the garden of The Grange, Fulham. This photograph was taken in 1874.



Right: Frontispiece of the Kelmscott Press edition of *News from Nowhere*, based on the east front of Kelmscott Manor.

'A vision, rather than a dream'

If 1984 has been overshadowed by the oppressive horrors of George Orwell's dystopian vision, it is both stimulating and liberating to read Morris's very different, and Utopian, *News from Nowhere*.

In *News*, Morris envisions British society freed from the oppressive, competitive capitalist economy of his own time. In the twenty-first century, Britain is a communist society - decentralized, unpoliced, based on the principle of cooperation rather than competition. People are healthy and beautiful, freed from the cares and ills accompanying the capitalist economic structure with its "huge and foul workshops and foul garbage, surrounded by an ill-kept poverty-stricken farm". Now Britain is "a garden, where nothing is wasted and nothing is spoilt" - neither the environment nor the people. Morris specifically rejects the oppression and circumscription of individuals which he recognized as an essential feature of capitalist society and which later became the focus of Orwell's chilling vision of the future.

In 1880 Engels had published a pamphlet in French (his first English edition appeared in 1892) entitled *Socialism: Utopian and Scientific* which condemned all Utopianism as wish-fulfillment fantasy, the only outcome of which would be the withdrawal of socialism from active political life into a daydream. Even when it appeared in 1890, *News from Nowhere* was attacked from precisely this point of view.

But Morris disagreed with the simplicity of Engels's critique. For one thing, workers were being pre-

sented with other, politically unacceptable Utopias (notably Bellamy's *Looking Backward*) and Morris felt there was an urgent need to counter with a truly socialist Utopia. Also Morris was concerned with the dispiriting atmosphere of the capitalist state which deadened and sapped all rebellion.

News from Nowhere was written both to entertain and stimulate. By presenting workers with a vision of the revolutionary transformation of their society Morris hoped to provide them with a respite from their daily struggles and with a possibility, something to work towards. Morris was acutely aware of the power of an oppressive social system to restrict vision, to limit the capacity of the oppressed to imagine anything better than the miserable conditions under which they were living.

Morris was nevertheless aware of the danger that such visions might become fantasy images which would work to reinforce the workers' passivity rather than involving them in transforming their revolution which they were living.

In describing the revolution which converts the British capitalist state into a communist society, workers are actively involved in the revolutionary process - through strike action, the organization of cooperative food supplies, and repelling official (police) violence. At the same time, Morris foregrounds the structuring dialectic of the Utopian text, the continual implicit or explicit references from the description of the Utopian society to the social conditions and ideology of nineteenth-century British society. The readers

of *News from Nowhere* are involved in a continuing social criticism which tends to prevent the reader from assuming a passive role.

This is reinforced by the dialectic of empathy and estrangement set up within the narrative, which ends on an uncharacteristic (for Utopian) unhappy note - with the Utopian traveller, Guest, returned to the horrors of his own society. In most nineteenth century Utopian narratives, the traveller found some way to remain in the Utopian society, confirming the reader's daydream and passive political role.

Morris's traveller returns to his own time, grieved at the loss of the Utopian society but more determined than ever to be part of the transformation of nineteenth century Britain to that idyllic state. The reader, empathetically linked to the traveller, is invited to adopt a similar political role and to become actively involved in bringing about a just and peaceful cooperative society.

Unlike Morris, Orwell does not provide his reader with much hope for the future. He does not make a

place in his text for viable political opposition. As a result, dystopias, like *Nineteen Eighty-Four*, may unwittingly contribute to the realization of his horrible vision by reinforcing feelings of helplessness and thus passivity.

If *News from Nowhere* can teach modern readers anything - with national governments apparently hell-bent on mutual destruction - it is the need for active participation in their society, not the apathetic or defeated paralysis which is the common response to threat such as that of nuclear war. Responsible social action reveals alternative possibilities for a more just and peaceful future and can help bring those possibilities into being, echoing Morris's optimistic words from the conclusion of *News from Nowhere*: "and if others can see it as I have seen it, then it may be called a vision rather than a dream".

The author teaches in the faculty of humanities and social sciences, New South Wales Institute of Technology, Australia.

BOOKS

The voyage to Corinth

Wealthy Corinth: a history of the city to 338 BC
by J. B. Salmon
Oxford University Press, £35.00
ISBN 0 19 814833 X

To an average member of the great British public today Corinth probably carries New Testament connotations or perhaps conjures up a vision of the spectacular Corinth Canal (first mooted about 400 BC, it is said, by the Corinthian dictator Periander, but not in fact cut until 1893). But to the average member of the great ancient Greek public the name would most likely have spelled girls, or to be more precise, whores, sacred and profane, public as well as private. "Not every man can make the voyage to Corinth," went the proverb, to which the model terracotta penises in the Corinth Museum add their silent but no less painful corroboration. Even the high-born lyric poet Pindar was unable to resist slipping in a coy reference to "the handmaidens of the goddess" Persuasion.

To a specialist ancient historian, however, not all the associations of Corinth are comparably alluring. The multi-state organization known to science as the "League of Corinth" was the formal instrument through which King Philip II of semi-barbarous, semi-Hellenic Macedonia expressed his suzerainty of Greece in 338 BC. It sounded the death-knell of the sovereign city-state which in happier times had cradled the legacy of Greece. It thus also marks an entirely appropriate terminus for J. B. Salmon's weighty and

important pioneering study. The function of Corinth as an international centre for prostitution and for commerce in goods other than those of the flesh, and the choice of Corinth as the seat of Philip's League, were both owed to an accident of geography. Corinth lies at the isthmus linking central mainland Greece to the Peloponnese and in antiquity possessed naval and commercial harbours on both the Corinthian and the Saronic Gulfs. Moreover, the Corinthians that is the territory Corinth controlled on either side of the isthmus - compensated for its fairly restricted extent (some 900 square kilometres) by containing pockets of great natural fertility and an abundance of spring-water to make up for the unusually low precipitation values. Dr Salmon rightly begins his remarkably comprehensive history with a richly documented and lavishly illustrated account of the physical character of the Corinthian based on all the available evidence including extensive autopsy. Among much else one might single out for special mention his proper insistence on the fundamentally agrarian basis of the Corinthian economy throughout the six centuries or so that he considers in detail.

This is not, however, a book for "general" or other non-specialist readers, though they too could derive some entertainment and instruction from the concluding chapter where the services of the handmaidens of Persuasion are discussed along with many other aspects of Corinth's wider role in the ancient Greek world. But for specialist ancient historians *Wealthy Corinth* is indispensable reading. For once a dust-jacket blurb cannot be bettered for accuracy, concision and clarity, and I make no apology for quoting a paragraph from it: "This is the first book in any language to deal with Corinth over the whole period to the Macedonian occupation of Achaia in 338 BC. In doing so it illuminates important aspects of Greek history in general: the character of the economy, the significance of archaic tyranny, international relations in the archaic and classical periods. It also demonstrates how archaeological evidence can be applied to the solution of historical problems in the Greek world."

In short, barring the rather severely empiricist methodology the book is in its approach more or less all what a regional study of an important ancient Greek state should be. In execution Salmon may tend to exaggerate Corinth's allegedly pivotal role in maintaining a balance between the superpowers Sparta and Athens, and on details there is almost always room for more than one view given the nature of our evidence. But his arguments are never less than wholly logical and rational, and the often dense texture of his systematic and narrative chapters are frequently leavened with wit and humour. *Wealthy Corinth* can be unreservedly recommended to all who research or study seriously the history of ancient Greece.

Paul Cartledge

Dr Cartledge is a fellow of Clare College, Cambridge.

Roman suspicion

The Christians as the Romans Saw Them
by Robert L. Wilken
Yale University Press, £12.95
ISBN 0 300 03066 5

The impression that the Christian Church made on the Roman world during its first few centuries is notoriously hard to recover. Before the middle of the second century few articulate pagans were interested enough to make more than incidental comment on Christianity; and later Christian censorship as well as the ravages of time. Of the five authors on whom Robert Wilken mainly concentrates, only the first, Pliny the Younger, wrote in Latin; the other four were well-versed in the arguments of Greek philosophy and antiquity well-informed about Jewish and Christian beliefs. It is a pity that Wilken does not cite Pliny's correspondence with Trajan on the Christians in full and reports instead in an artful journalistic para-



A centaur and a man locked in combat, from *The Elgin Marbles*, a new British Museum publication by B. F. Cook (£4.95).

Imperial biography

Suetonius: the scholar and his Caesars
by Andrew Wallace-Hadrill
Duckworth, £19.50
ISBN 0 7156 1747 8

"This enjoyable task" was Graves's verdict on his experience of translating Suetonius's *The Twelve Caesars* for the Penguin Classics. It is not surprising the Graves relished Suetonius as he found there some of the facts and rumours which make the Claudius novels seem like court-history come alive, with intrigue and scandal taking the place of dignified ceremony. But in general Suetonius, though popular, has not been an approved author in the established canon. His Latin style was not suitable for imitation; students born to the classical purple were not expected to write pastiches of Suetonius. And his content has often been dismissed as unreliable or salacious. His reputation sank because he failed the test of silver, let alone gold, Latin artistry and he did not offer the solemn narrative expected of the "best" classical historians.

Andrew Wallace-Hadrill's learned and attractive study does much to explain Suetonius and will appeal not only to professional scholars but also to those with more general interests. He first places Suetonius as a scholar and antiquarian and then goes on to provide a useful analysis of Suetonius's interests and themes in writing imperial biography. Suetonius emerges as a convinced pro-emperor and may therefore be restored to the classical establishment.

The surviving Caesars is no more than a small proportion of the original

Suetonian corpus. The problem for the modern scholar is to relate the imperial biographer to what can reasonably be inferred about the other works. Wallace-Hadrill rightly sees Suetonius as a scholar-collector, not a historian, and compares him with a host of (to us) minor writers. Many of these are inevitably no more than dim names and titles, and the information about them is somewhat colourless. The distinction between Suetonius and the historians is right but the emphasis is perhaps too vigorous. He does not attempt the grand style of the historians, but to deny him pathos, for example, is surprising. The passages on the deaths of Galba and Nero in their non-rhetorical way are moving comments on the subject loneliness of great power that has lost support and credibility.

One of the perplexing things about the Caesars is that the lives of the emperors are much feebler than the earlier. Was this because Suetonius was dismissed by Hadrian and so was denied access to the archives? This might be too simple, too modern an explanation. Wallace-Hadrill points out that Suetonius's emphasis on the Ciceronian and Augustan ages was a habit of mind detectable in his other works.

Even after this sympathetic appraisal, Suetonius remains a puzzling figure. Why, one wonders, is his scholarship so erratic, sometimes judicious, sometimes trivial? The crux of the matter is implicit in Syme's remark that Suetonius was "crude and superficial" compared with "the subtle and subversive Tacitus". On this subject too Wallace-Hadrill has some illuminating observations.

Alan Wardman

Alan Wardman is professor of classics at Reading University.

Jerusalem and by pointing to contradictions between the Old and the New Testaments.

Wilken could with advantage however have made more use of Julian's writings to illustrate public perceptions of Christianity. For Julian's eagerness to trace the Greek tradition of philanthropy back to the Homeric rules of hospitality and to his other three authors thought it worth engaging in systematic argument against the propositions of Christianity.

Celsus challenged the view that God became man on the Platonic ground of God's immutability, yet assailed the divinity of Christ not on principle but on the ground that Jesus was a magician, less worthy of deification than Daniel or Jonah. Porphyry had enough scholarly acumen to see how vulnerable Christianity was to historical criticism of the circumstances of Jesus's life and death, and impressively anticipated modern scholarship by recognizing that the Book of Daniel was written in the second century AC after many of the events it purports to predict. Julian's inside knowledge of the Church made him a particularly formidable adversary, and Wilken emphasizes the skill with which he played on the antagonism between Jews and Christians by encouraging the reconstruction of the Temple at

John Creed

John Creed is senior lecturer in classics at the University of Lancaster.

Classical roots

The Seven Liberal Arts in the Middle Ages
edited by David L. Wagner
Indiana University Press, £25.00
ISBN 0 253 35185 5

Until the thirteenth century, the seven liberal arts provided the foundation of medieval learning. Their subjects, of grammar, rhetoric and logic (the verbal arts), and arithmetic, geometry, music and astronomy (the mathematical arts), were taken as the main branches of learning. They all originated with the Greeks and their history is essentially that of the transmission and adaptation of Greek philosophy, science and Hellenistic and Roman culture, to the Middle Ages.

The Romans made virtually no independent contribution to the mathematical subjects, or to philosophy and abstract thought generally; indeed they diluted and simplified these through handbooks and digests mainly for educational purposes, while their own emphasis was upon a literary culture, especially rhetoric, as a training for public life and law. The entire of the liberal arts as the preparation for the higher study of philosophy also derived from Greece and was formulated in the educational programmes of both Plato and Aristotle. By the late Roman Empire both educational theory and practice had become cashed in a series of handbooks and texts which formed the basis for medieval learning and education.

Although medieval culture had a classical foundation, until the eleventh century, it was a rudimentary and exiguous foundation, supported by a handful of late classical and early medieval manuals and encyclopaedias, and a few classical, mainly literary and logical, texts. Its emphasis was therefore on the three verbal arts (which came to be called the trivium and were distinguished from the four mathematical arts of the quadrivium).

The revival of learning beginning in the eleventh century, and above all the recovery of much of Greek philosophy and science together with a large body of Arabian philosophy and science in the twelfth century, transformed the state. The seven liberal arts, which hitherto had constituted knowledge, came to be just one part of it. As Greek times, they were subordinated to philosophy, which served as the preparation for the higher study of theology, law and medicine. The liberal arts were not superseded but rather were incorporated into a wider scheme of knowledge, and, as subjects, have continued in various forms to the present.

The essays in this volume trace the origin and development of the seven liberal arts until they lost their exclusiveness in the thirteenth century. They discuss both the identity of the subjects themselves and their formal place in the scheme of learning, though those two aspects are not always easy to harmonize. The separate studies of each of the arts as subjects are more successful; even in the necessary summary form which they have to take here, they provide a useful introduction to them. For the most part, however, there is not the scope to discuss their place in the medieval curriculum. A final chapter, designed to consider the subsequent role of the liberal arts in the thirteenth century, goes some way to doing so, but it is regrettably framed too much as a polemic and does not realize initial expectations.

A further complication in the medieval phase of the arts is that they had to subserve, certainly in the period until the twelfth century, a higher Christian purpose. There is a separate chapter which traces some of those considerations. They also emerge in the chapters on rhetoric, where the Christian purpose, to persuade believers, is further developed in the thirteenth century in the new formal genres of preaching. The very form of a full study of the whole of medieval intellectual life could do justice to the complexity of the liberal arts. Short of that, this volume makes a helpful beginning.

Gordon Leff

Gordon Leff is professor of history at the University of York.

BOOKS

From all sides

The Uncivil Wars: Ireland today
by Padraig O'Malley
Blackstaff Press, £7.95
ISBN 0 85640 301 6

The *Uncivil Wars* is based on a series of interviews with political figures representing seven key interests in the Irish conflict - the Irish Republic, Britain, Official Unionism, Paisleyism, the Social Democratic and Labour Party, the IRA and the Ulster Defence Association. Their political positions and strategies are analysed within the Anglo-Irish context. The process is rather like a recipe in reverse: the ingredients of the Irish story are carefully isolated, and the contribution of each to the finished dish is measured and assessed.

It is of course possible to query the selection and treatment of each ingredient. Why was the United States excluded? Is Ian Paisley's following as monolithic as it is presented, given recent defections and disputes? Was it possible to gauge political interests accurately during the hunger strikes hysteria, when most of the interviews were carried out? Measured against the quality of this book, however, these all become peripheral issues.

There is an irresistible logic, aided considerably by a lucid style, to O'Malley's outstanding analysis. The weaknesses in each position are identified in turn. On Paisley's lack of options: "Absolute positions cannot appear to be less than absolute, otherwise they are not positions at all. 'No surrender' cannot encompass 'not too much surrender'." On Britain: "The British have no plan; their attitude today towards Northern Ireland is the same as it was sixty years ago."

On IRA violence: "The question basically is a moral one: are Northern Ireland's Catholics being justified in repressed to an extent that justifies a campaign of violence to end it? They



"And then my dad said, 'Why don't you join the army and stop standing around on street corners?' A cartoon from the army's weekly newspaper *Visor* reproduced in *Dressed to Kill: cartoonists and the Northern Ireland conflict* by John Darby (Appletree Press, £4.95).

are not. Nor is there evidence to suggest that they themselves believe they are." On the UDA's plan for an independent Ulster: "There is no common history, other than the history of conflict."

O'Malley particularly emphasizes the critical importance of the South where, he claims, commitment to Irish unity has been replaced by a vague aspiration to it. For that very reason "the South is the key to the problem. Only the South can pronounce the dream of unification false and step away from it."

Further, only the South can resolve the impasse between the need to resolve the IRA in a settlement without giving in to it. While this decision to isolate the key position of the South is interesting, it ignores much of his own analysis which emphasizes the multilateral nature of the problem. It is difficult, for example, to envisage a settlement which does not also encompass both an internal accommodation and British support. It has also to be demonstrated that the IRA would be greatly influenced by a change of mind in the South.

Having cleared away many (though, as he admits, not all) of the conceptual cobwebs, Marshall proceeds to examine the nature and scope of constitutional conventions in a variety of

"building blocks" supporting this framework are defined by O'Malley. Dublin and London must acknowledge that settlement is impossible without the involvement of both; articles two and three of the South's constitution must go; nationalists and Unionists in Northern Ireland "must address the inconsistencies that undermine their respective positions"; and there are others.

The problem is that none of this considers why or how anyone should adopt these new positions. Implicit in the analysis is the hope that realization of the inconsistencies may produce some sort of spontaneous conversion. On past experience this appears to be unlikely. Nevertheless this book is the first, and a most impressive, political analysis of Northern Ireland to be based on interviews. It will become an indispensable political science textbook, and a source for future historians. It provides a basis upon which strategies for change might be developed and evidence that O'Malley is well equipped to explore them in the future.

John Darby

John Darby is lecturer in the department of social administration and social work at the New University of Ulster.

The fate of Tokyo Rose

The American Inquisition: Justice and Injustice in the Cold War
by Stanley I. Kutler
Faber, £10.50
ISBN 0 571 12058 X

"Inquisition" is a strong word but few readers will put this book down without feeling that the facts justify such emotive terminology.

Stanley Kutler's theme is distortion of the legal process by political motives, or more precisely the yawning gap opened up in America during the late forties and fifties between "law" and "justice". Familiar ground perhaps, given the flood of recent studies exposing the American government's relentless pursuit of even marginally non-conforming individuals to consider the subsequent role of the liberal arts in the thirteenth century, goes some way to doing so, but it is regrettably framed too much as a polemic and does not realize initial expectations.

A further complication in the medieval phase of the arts is that they had to subserve, certainly in the period until the twelfth century, a higher Christian purpose. There is a separate chapter which traces some of those considerations. They also emerge in the chapters on rhetoric, where the Christian purpose, to persuade believers, is further developed in the thirteenth century in the new formal genres of preaching. The very form of a full study of the whole of medieval intellectual life could do justice to the complexity of the liberal arts. Short of that, this volume makes a helpful beginning.

As a constitutional and legal historian Kutler shows a sure grasp of the labyrinth of American law and of the many ways in which bureaucratic and military empire-building could entrap the unwary citizen who had the misfortune to attract the interest of the guardians of true Americanism. His method is the case study, which neatly links human interest with exploration

radical labour leader Harry Bridges's marathon effort to fight off government deportation proceedings, the indictment of China expert Owen Lattimore for perjury, the harassment of the lawyers who defended the eleven Communist Party leaders in the Dennis case, and the less familiar case of John William Powell, who roused the government's ire with his accusation that the Americans had used bacteriological weapons during the Korean war. The government lost its cases against Bridges, Lattimore, and Powell, but the costs to the defendants in time, money, and disruption to their lives were enormous. Kutler notes that Lattimore's estimated defence costs - which his lawyers waived out of a sense of public duty - were \$2.5 million. Among the most startling and least edifying revelations comes in a chapter on the Passport Division of the State Department, led between 1927 and

1955 by one Ruth Shipley, who ruled over what amounted to a private fiefdom with an iron and highly partial hand. Among those whose freedom to travel was materially curtailed by Miss Shipley were Linus Pauling, Rockwell Kent, and Paul Robeson.

Professor Kutler points out that his book could not have been written without the aid of the Freedom of Information Act. But he notes that its provisions have been severely tightened under the Reagan administration, which suggests that there may be few grounds for complacency about the status of constitutional guarantees of individual liberty. Overall, however, Professor Kutler is moderately sanguine in the light of his studies. He writes with a sense of outrage, but it is the outrage of a passionate believer in American values and institutions, not that of a disenchanted radical for whom the

Q. What made Malcolm Bradbury roar with laughter?

A. The shrewd, articulate and consistently hilarious successor to *Lucky Jim* and *The History Man*

COMING FROM BEHIND

by Howard Jacobson.

"This hard-won chronicle of life in a rotting Poly is to that section of higher education what Bradbury's, Sharpe's and Amis' novels were to the new universities, redbricks and technical colleges." *The Times Higher Education Supplement*

Howard Jacobson is a former lecturer at Wolverhampton Polytechnic. COMING FROM BEHIND is his first novel.

"A very funny, bitterly intelligent comic novel... do read it." *Malcolm Bradbury*

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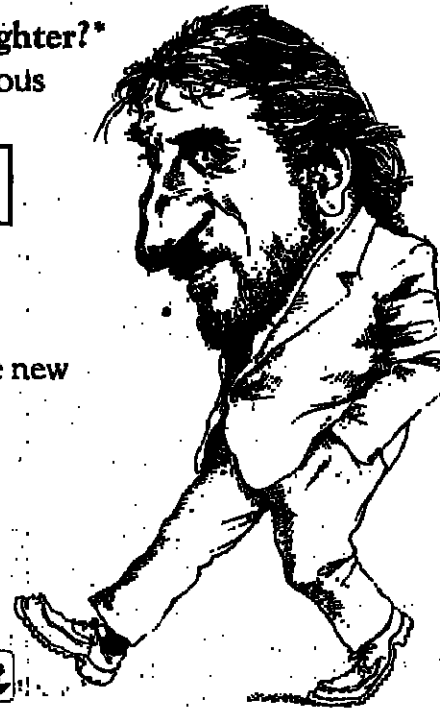
system itself is at fault. "To a point," he concludes, "the legal system tolerated the accompanying distortion; yet the very autonomy of the law thwarted any total inversions of the system."

One hopes that thirty years from now it will not be necessary for future Professor Kutlers to look back on the new cold war of the 1980s and find that similar stories are there to be told.

Richard Crockatt

Richard Crockatt is lecturer in the school of English and American studies at the University of East Anglia.

Allen & Unwin have issued a paperback edition of Michael Howard's *The Causes of Wars* (1983). The new edition includes two additional essays on arms control.



BOOKS

Housing questions

House and Home in the Victorian City: working-class housing 1850-1914 by M. J. Daunton
Edward Arnold, £32.50
ISBN 0 7131 6384 4

Housing history has recently, and belatedly, moved down the social scale. From a concentration on the architecture of the country house historians like Michael Thompson, T. H. Lloyd and David Rubinstein have moved on to a consideration of the middle-class house, while others have penetrated deeper still into the back-to-backs, the tenements and "rookeries" of Victorian England. Martin Daunton's impressively researched book follows the lead of Stefan Muthesius's *The English Terraced House*, but supplements that work by its detailed examination of the structure of the working-class housing market, the role of rents and rates, and the control and management of house property.

Many intriguing questions are here raised and, at least in part, answered. Why, for example, was there such regional diversity of housing form, from the back-to-backs of the West Riding and Birmingham to the two-story flats of the north-east and the terraces of London and Bristol, and why were these individualized dwellings all so different from the tenements of the Scottish cities? In the context of European housing it was the English cottage, with its larger number of rooms and greater differentiation of internal space, that was untypical, while the Glasgow tenement closely resembled that of Berlin or Paris.

English towns, generally unhampered by defensive city walls after the fifteenth century, had spread outwards rather than grown upwards: north of the border the feuing system had pushed up land prices and, coupled with greater costs of construction, had resulted in higher rent levels than in England. Daunton therefore explains the distinctive housing types in the two countries primarily in terms of the relationship between wages (and, therefore, effective demand) and rents, rather than as the consequence of tenurial or cultural differences. Whether the hypothesis would hold for the variations in housing types within

England itself is another question. Again, what sort of people were the landlords of Victorian cities, at a time when 90 per cent of householders of all classes rented their accommodation? Were they the blood-sucking capitalist oppressors of the poor so often represented in popular literature, or little men deriving a meagre return from a lifetime's investment, the victims of unpaid rents and soaring rates? It was not only outcast London which had uttered its "bitter cry", for, as the *Building Societies Gazette* remarked in 1907, "the bitter cry of the harassed landlord is heard on all sides".

By then the "housing problem", identified in the 1880s, was moving into crisis. To the Liberals, and particularly to Lloyd George, the root of the problem was the high price of land, which deterred builders, forced up house rents, caused overcrowding and slums. The answer therefore lay in the taxation of land values, which would remove the incentive for owners to postpone development until prices reached high levels, bring more land on to the market at minimum transfer cost, cheapen building costs, lower rents and reduce overcrowding. "What is the Housing Question," asked Campbell-Bannerman, "but one phase of the Land Question?" Politically, a tax on land values would be a convenient indirect attack on aristocracy: economically, it would redistribute national income from rent towards capital and labour, and remove the housing problem. This was the background to the tax on the unearned increment of land, proposed in the "People's Budget" of 1909, which became a major constituent of the constitutional crisis of 1910-11.

All this Daunton documents clearly and fully for the first time. It may be complained that his book somewhat belies its title, for there is much more about the Victorian house than about the Victorian home. Here we have only two chapters - one on domestic technology and one on domesticity and the working class, both good so far as they go, but leaving us asking for more.

How people used their limited space, how household tasks were organized, how families cooked, ate, washed, slept, lived and loved in their homes are fascinating questions about which we still know too little. What seems clear is that the decade of the 1890s was a turning-point in domestic technology with the widespread adoption of the pre-payment slot meter for gas cooking and lighting, the supply of piped water into the house, and the installation of water-borne sewerage systems. Coupled with rising standards of living, shorter working hours and increased leisure, these changes heralded transformation in working-class life from a culture based on the workplace to one based on the home and the family.

John Burnett

John Burnett is professor of social history at Brunel University.

Modern democrats

The Chartists by Dorothy Thompson
Temple Smith, £19.50
ISBN 0 85117 229 6

Much has been written on the Chartist movement in recent years, but no book has matched the consistent quality and authority of this study by Dorothy Thompson. Her approach is essentially analytical, and throughout the work she challenges old ways of historical thinking, and suggests or confirms new approaches. In particular, she is critical of those historians who have viewed Chartism from the perspective of hindsight. The working people who belonged to this great political movement were neither "too reactionary" nor "before their time".

Their ideas belonged precisely to that exceptional period of ferment, the 1830s and 1840s. People living through these years did not see uncontrolled industrialism, and political economy as inevitable developments: the Chartists offered them a different prospect, of change, especially the notion of democratic control over the economy, the process of work, community life, education and parliamentary politics.



Shirley Brooks, one of the editors of the *Morning Chronicle*.

Social reporting

Labour and the Poor in England and Wales 1849-1881

Volume I: Lancashire, Cheshire, Yorkshire

Volume II: Northumberland and Durham, Staffordshire, the Midlands

Volume III: the mining and manufacturing districts of South Wales and North Wales

edited by Jules Glaswick

Cass, £19.50 and £9.50 per volume

ISBN 0 7146 2907 3 and 4038 7; 2960 X and 4039 5; 2961 and 4040 9

"There is a gas work rising, spick and span new, close to where the long grass is waving on the ruins of a brave hall." "What, no cheese?" said I. "Dovell a bit do I have," replied she with a smile. "It's five and sixpence a week I give, and out of it I may rent a shilling".

The conventions of the picturesque as found in the Victorian novel coexist with those of the examination of witnesses as carried out by the Royal Commissions in the republication of one of the most remarkable pieces of journalism of the middle of the nineteenth century. *The Morning Chronicle's* reports on labour and the poor are best known for the investigations of the metropolitan districts carried out by Henry Mayhew, for he republished some of that work in his *London Labour and the London Poor* in book form. During the 1970s all Mayhew's contributions have been retrieved and republished in their original version.

No one has done that for the even more numerous reports by five other reporters dealing with the provinces. In 1974 Frank Cass published a one-volume selection and it is only now that the full text is being made available. The first three volumes, which deal with the manufacturing and mining districts, have already appeared. The remaining five dealing with Merseyside and Birmingham and with the rural districts are promised for later this year.

To judge from these three volumes there is not much that will startle the well-informed social and economic historian, but there is a great deal that in its detail will fascinate him and will hold the interest of a wide range of readers.

Beside the scenic description and the detailed investigation of wages, diet and clothing, another feature of these reports is the careful description of work processes. Neither too technical nor too vague, they are to us as interesting and as strange as they must have been to the *Morning Chronicle's* original middle-class readers in London. Of these, the tour of the Dowlais ironworks at Merthyr is the most impressive. It begins high up on the platform from which the blast furnaces were fed and passes through every

process until the still burning slag tipped on vast heaps by boys as well as men, while the noise is gripped by the teeth of the slinging.

Yet the focus is always on strange new forms of labour and workers, their health, their appearance, their income and their diet. To observe the sunken eyes, the "palely white" faces with their "poorly shining waxy texture" that characterize the highly paid furnace men, as his colleague had commented on the "tallowy yellow" skin of the 120 cashmere spinners. They peer into the furnace to see who has meat or cheese and observe their clothes, describing the canvases dresses of the Welsh girls in ironworks and their bonnets of straw flattened at the crown by carrying home lumps of coal on the head. They insistently seek out the aged elderly inhabitants whom they can question about the changes that have been experienced by the land and by the community. The result may not have the vividness of Mayhew's reporting, but it was well worth reading and republishing.

The complete original text is reproduced here, but not in the form of "letters from our correspondents" which it originally appeared in the *Morning Chronicle*. The fragments form has been replaced by a continuous text and sub-headings have been added. The result is a readable book, but unfortunately there appears to be no indication to help us to read this text to the original.

The other contribution can be welcomed without reservation. The index inquiries into earnings that the investigators have resulted in a mass of information, brought together in tables giving the average weekly wage in the various industries. The table headed by the most skilled kinds of gunmakers and die sinkers in the Birmingham metal trades with an average weekly wage of 70 shillings. The very young children of both sexes in the Nottingham lace industry who carried out the easiest finishing process bring up the rear with weekly earnings of between one and three shillings.

What is being made available in these three volumes are descriptions of the areas in which the greatest changes had taken place. They naturally have also attracted most attention from other observers and we know a great deal about the state of the industrial areas in the middle of the nineteenth century. It is one of the most valuable features of this survey that it covered so wide a range. What the volumes on the rural districts appear later in the year they can be expected to cast light on dark corners and to reveal communities even stranger to us than that of the textile workers or miners. Soon may that be.

E. P. Hennock

E. P. Hennock is professor of modern history at the University of Liverpool.

specific instances and must therefore exercise a direct control by choosing the questions to set to the learner and the anticipated feedback to offer in reply. Although simulation programs provide command sets for the user, since they store no records of decisions, they cannot offer advice or explanation. Thus, on the one hand the contributions of the learner are underplayed, and on the other the human teacher has a large task in providing a coordinating intelligence.

By way of remedy, O'Shea and Self invite their readers to learn from the concepts and techniques of artificial intelligence (AI), a field in which knowledge representation and its management have been a major concern. Despite this, the book is not narrowly focused but uses the arguments as a platform to illustrate and discuss the relevance of AI to computer-based learning and to contemporary ideas in developmental psychology. Existing computer-based learning materials are assessed in terms of method and design, and the educational philosophy underpinning these. A historical perspective traces the shift from task-based objective-bound programs to materials which allow students greater initiative in developing their own ideas and knowledge structures.

Further chapters consider how rule-based systems can be used to provide models of a student's understanding and how educational programming languages (for example, Logo) provide the student with tools to develop skills of problem-solving and self-expression. The final sections consider difficulties which arise in making the computer effective in the classroom and speculate on the future directions and impact of computing technology. The writing is concise and the content is non-technical. Examples are frequent, carefully chosen and well discussed; notes, attached to each chapter, are informative; and the material is well referenced.

Although it could be argued that the ideas and techniques of AI are re-moved from the experience of teachers

BOOKS

Tutoring programs

Learning and Teaching with Computers: artificial intelligence in education

by Tim O'Shea and John Self

Harvester Press, £20.00 and £6.95

ISBN 0 85527 573 1 and 7108 0665 5

Computer-Based Learning: practical microcomputer methods

by Graham Beech

Sigma Technical Press: Wiley, £8.50

ISBN 0 905104 45 5

With the current euphoria surrounding microcomputers and the stimulus provided by current initiatives from local education authorities and the national Microelectronics Education Programme, many teachers and educators will be trying to think in realistic terms about the place of the computer in teaching and learning. They will look to the literature for guidance, but it is an uneven field, not much distinguished by the quantity or by the quality of its educational thought.

O'Shea and Self's book, however, will repay careful reading. Though not a manual of practice nor a handbook of classroom case-studies, it presents an argument, a perspective of computer-based learning to stimulate thought and to engage teaching experience. Briefly, the authors consider learning as the development of procedures of reasoning and understanding through interaction with a knowledgeable teacher. They complain, and explain, that most computer-based learning programs are not equipped to handle knowledge in a general sense. For example, tutoring programs pre-store

and from the hardware and software resources currently at their disposal, the authors would reply in a variety of ways, pointing out that their purposes are to inform, that the origins and ideas of Turtle graphics/Logo, for example, originated from AI laboratories, that teachers have to fill out and cover for the knowledge deficiencies of current programs, and that developments in computer technology are extremely rapid.

Graham Beech speaks with a contrasting voice and with a different accent. His book has a direct message, mainly concentrates on tutorial-type computer-based learning, and sets out to give practical advice on program design and implementation. After a survey which selects various types of "success stories" in schools, colleges and commercial/industrial training, the most important section of the book deals with lesson planning. From analysis of objectives, subject matter is compared and related through a scheme developed by D. M. Merrill, which classifies content under four concepts, procedures and principles. These link to performance objectives of remembering, using and constructing.

As author languages are the vehicles for implementing such teaching schemes on computers, a large part of the book is taken up with a description and discussion of how the language Super Pilot can be used for this purpose. The book is well presented, clearly written, and will be of practical use for teachers and trainers wishing to follow such instructional schemes. These applications are, however, more likely to come from industry and commerce than from schools. Furthermore, the author is critical only in his own terms; readers who wish to feel entirely comfortable must first take his values on board.

J. R. Hartley

J. R. Hartley is director of the Computer-Based Learning Unit at the University of Leeds.

Syntax rules

Micro-PROLOG: programming in logic

by K. L. Clark and F. G. McCabe

Prentice-Hall, £12.95

ISBN 0 13 581264 X

Many people still find it hard to believe that a computer can do certain kinds of logical reasoning. This seems to stem from a belief that formal logical manipulation requires some sort of understanding. Yet it is only the translation of a problem into logical expressions - a programmer's job - that needs intelligence. Thereafter, the working out of consequences can be done by rigid rules.

Prolog is a computer programming language based on first-order predicate logic. It is used interactively, like Basic, but otherwise has no similarities to any of the familiar language groups such as Pascal, Fortran or BASIC. The user inputs facts and rules of the form "This is so" and "If these are so, then that is so", in accordance with certain syntax rules, and then asks questions. Prolog uses the facts and rules to deduce the answers, where possible. Currently, the language is a major focus of research in computer science and artificial intelligence, partly because the Japanese have chosen it as one of the foundations for their fifth-generation computer systems project. One of that project's aims is to develop a much-extended Prolog, provisionally named "Himiko" after a woman in Japanese history, as a tool for developing intelligent systems. Prolog's prominence is recent: it was first conceived by Colmerauer at Marseilles in 1972, and there was no published description in English until as late as 1977. Nevertheless, there are now several distinct dialects, of which micro-Prolog is just one. It is based, however, on the pioneering work of R. A. Kowalski at

Imperial College, in which both these authors have been deeply involved.

The pretentious "micro" is misleading. It is not a cut-down version, but is available for a variety of microcomputers and minicomputers including the Spectrum and the BBC model B. Divided into four parts (basic concepts, logic programming, core micro-Prolog, and applications), the book provides a good introduction to the promise of the language, in a style which is discursive rather than academic. There is, however, a lot to learn. Someone well versed in, say, Basic might well find Prolog harder to get to grips with than would a complete novice. The idioms and techniques are very far from those of a more conventional language. As practical work is therefore essential, the first three parts offer a good crop of exercises (with answers). The fourth part can only hint at potential uses - expert systems, problem analysis and so on - and although the authors suggest approaches they do not try to go very deep. The book would be a useful mainstay for the practical part of an introductory course on artificial intelligence at senior secondary school level or higher.

Two small criticisms: one is the spindly typeset; the other is that the first half introduces micro-Prolog through the medium of a Prolog interpreter written in core micro-Prolog, which is intended to make things easier for the beginner. However, although the syntax it expects is easy to grasp initially, it may make life harder for those who have made some progress. For the level at which this book is aimed, I feel beginners could cope with the underlying syntax from the start.

Despite these minor niggles, however, the book does provide a sound practical forerunner of one of the future trends of computer science.

Peter Ross

Peter Ross is lecturer in artificial intelligence at the University of Edinburgh.

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BOOKS

A choice point in a maze

From Darwin to Behaviourism: psychology and the minds of animals by Robert Boakes
Cambridge University Press, £35.00 and £15.00
ISBN 0 521 23512 X and 28012 5

"Everything important in psychology... that is everything save such matters as involve society and words can be investigated in essence through the continued experimental and theoretical analysis of the determinants of rat behaviour at a choice point in the maze". So wrote E. C. Tolman in 1932 when behaviourism had a firm hold in the United States. How could anyone have been so silly as to believe such a thing? The reader will find the answer in Dr Boakes' account of animal psychology from Darwin to behaviourism.

Tolman's claim rests on several assumptions. The first is that rats are like people in the respects that matter. Before the time of Darwin it was believed that there was a great divide between human nature and animal nature. It had first to be accepted that man had an animal ancestry before it made sense to hope that the study of the behaviour of animals would throw light on human mental evolution.

The second assumption is that such studies were part of the subject matter of psychology. Psychologists at the turn of the century tended to regard psychology as the study of the human mind, and their method was to collect reports from people observing their own mental processes. In 1913 J. B. Watson expressed his impatience with the debates then current on whether "auditory sensations have the quality of 'extension' or whether 'there is a difference in texture' between images and sensations" (page 170). As rats can only give feeble answers to such questions, it seemed to Watson that it might be worth changing the question.

The behaviourists had more to combat than introspection. They shared a third assumption, that anecdotal evidence for the achievements of animals might be unreliable. Thus, the proper way to proceed was by conducting experiments. C. J. Romanes noted that cats could learn to open garden gates, and he was convinced that this fact proved that they were capable of "rational imitation" (page 26). C. L. Morgan reported that his dog, Tony, learned to open a gate without observing people working the latch (page 36). As the issue could be resolved only by experiments on groups of animals, E.

L. Thorndike collected some cats and constructed some Heath Robinson boxes and latches (photographs on page 70) and found that his cats benefited not at all from the opportunity to watch other cats manipulating the latches so as to release themselves from the boxes (pages 71-72). Although he tried the same experiment on three monkeys, he could only conclude that "the results are as a whole on their face value a trifle ambiguous" (page 73). I take it that this means that to his horror the monkeys had succeeded.

From Thorndike on, psychologists working with animals also assumed that the study of learning was central to psychology. At the turn of the century, psychology tended to be dominated by questions about perception, and in Darwin's time studies of animals tended to concentrate on their instincts. Indeed, in later years William McDougall and others tried to identify the human social instincts, and at the height of the craze over six thousand classes of instincts had been named (page 216). It is no wonder, then, that behaviourists stuck to the hard data they obtained from their learning experiments, haggling only about whether there was one sort of learning or two.

The experiments on learning produced objective data: the rat learned the maze in 15 trials; the dog salivates when it hears a signal for food. Both running speed and salivation are easily measured. For Pavlov, a physiologist, the study on salivation in the dog could provide clues as to events in the brain, but for Watson, the psychologist, it was the events on the surface, not those under the skin, that were of interest. Later behaviourists shared the assumption that it was not for psychologists to speculate about central processes. Although not all psychologists may have gone as far as Watson in regarding language as just a habit "in the throat" (page 171), it was common ground that behaviourists must not concern themselves with cognitive processes that were hidden in the head. Thus, Watson was forced to explain away the fact that rats could "remember" for a few seconds the location of food (pages 156-157): they obviously cheated by facing the correct location throughout the interval (page 172). But raccoons could also remember and they did not orient in this way; and Watson, the honest scientist, had to admit that "there is no known mechanism of response which might account for this". The actual mechanism, of course, is called memory.

One last assumption underlies Tolman's brave statement. This is that the study of learning in rats will indeed prove relevant to the understanding of people. And here the founding fathers proved themselves more worthy than their successors. Thorndike and Watson did not simply make the assumption; they went on to test it. Thorndike spent his years investigating learning in education, and Watson conducted studies of the development of babies and children (page 173 and pages 227-228). They appreciated, if others did not, that speculations about man on



Karl Krall training a horse; an illustration from *From Darwin to Behaviourism*.

the basis of animal studies must be directly tested.

It took World War II to bring psychologists to their senses. It quickly became apparent that aiming a gun at a moving target was not simply a matter of salivation or muscular twitches. The telephone exchange that served as a model for Thorndike's stimulus-response links (page 75) has been superseded by the computer. It would not now be sensible to speculate about how a rat finds its way in a maze without having a peep inside a cruise missile. Psychologists are now interested not in peripheral muscles but in central cognitive operations.

This story is not a précis of Boakes' book. But it is a story which it is much easier to tell given the clear historical account that Boakes presents in his eight chapters: on mental evolution, intelligence and instinct, experimental psychology and habits, reflex action and the nervous system, conditioned reflexes, comparative psychology and the beginnings of behaviourism, and problem solving and purpose, and finally nature and nurture. Although Boakes is more concerned to give a straightforward account than to tell any story, he enlivens the account with many photographs of people and apparatus. Some of these latter are marvellous: from the photographs of Thorndike's puzzle boxes on page 70, for example, you can see that he was not funded by the Medical Research Council.

I recommend the book to all those, like myself, who underestimated Watson. Were he alive today he would certainly be studying children and not rats, and I suspect he would be working on memory.

R. E. Passingham

R. E. Passingham is lecturer in experimental psychology at the University of Oxford.

Mammal guide

Walker's Mammals of the World Volumes 1 and 2 by Ronald M. Nowak and John L. Paradiso
Johns Hopkins University Press, \$65.00 the set
ISBN 0 8018 2525 3

Just over fifty years ago, Ernest P. Walker (1891-1969) conceived of the idea of a major reference work on the mammals that could serve as a general guide to the bewildering array of some 4,000 modern species. It is not surprising, given both the complexity of the task and the special nature of mammals, that the gestation period was quite long. The first edition, comprising two volumes of profiles of individual mammals and one volume of basic references, saw the light of day in 1964 and was a collaborative undertaking involving six co-workers in addition to Walker himself. For most of the long period of preparation, Walker was assistant director at the National Zoo in Washington and therefore had a special professional interest in dealing with a wide range of different mammal species.

The first edition of *Mammals of the World* rapidly became recognized as an easily used and essentially reliable reference work and it must now be familiar to anyone concerned with the biology of mammals in any way. Walker selected the genus as the basic unit for treatment in the text and his original aim (almost achieved) was to have a photograph of a living representative of each genus. As far as possible, standard information on appearance, size, habits and reproduction was provided in each genus profile and many authors of scientific papers have used the data provided as a starting point for comparative exercises.

Of course, as part of the general "information explosion" that has taken place in biology, much more has been learned about the mammals in the twenty years since the first edition of *Mammals of the World* appeared. As a reflection of this, new editions were produced in 1968 and 1975; but surprisingly few changes were made to the original text and even the third edition differs largely in the inclusion of new photographs and some new information on a small number of particularly poorly known species. The time is therefore ripe for a completely overhauled version of the book, and this has been accomplished in the fourth edition, compiled by Ronald Nowak and John Paradiso. Although they have kept fairly faithfully to the original approach and format, the text has been completely rewritten and includes a vast amount of new information. The individual sections on mammal orders have been sent to outside revisors for checking, a stratagem which has ensured a high standard of accuracy throughout.

The authors have dispensed with the third volume of references, on the reasonable grounds that it is quite impossible now to try to provide a basic set of references for the mammals generally, and there is instead a condensed bibliography of up-to-date references at the end of the second

volume. In fact, in response to one of the major criticisms of the original work, specific references in the bibliography are cited in the genus profiles, thus greatly enhancing the value of the book as a reference work for practising biologists. In addition, the new information, the complete revamped fourth edition has about 25 new photographs.

Despite the improvements, however, a few flaws remain. In particular, since accurate data on body weights of mammals species are now widely required for studies of scaling effects of body size, it would be helpful to have (wherever possible) reliable measurements for adult individuals, preferably with the sexes separated, and in *neotypes* presented in consistent fashion. Overall ranges that clearly include immature individuals for many species are of little value. Further, it is a pity that in the new edition the genus *Rodentia* has been split between volume one (*Sciuromorpha*) and volume two (*Myomorpha* and *Hysticomorpha*). This seems to have occurred simply because the sequence of orders in Walker's original has been kept (for no obvious zoological reason), and it means that broad-minded rodentologists will have to have both volumes to hand simultaneously. Finally, it would be useful to have some limited discussion of the classificatory system used in the book, particularly because of the continuing turmoil in higher category taxonomy for certain mammal orders (for example, Primates). Although Nowak and Paradiso have wisely followed a fairly conservative course, this does need some explanation. Unusually, there is almost a page on Monotreme biology and classification, almost two pages for marsupials, but nothing on the eutherians ("placental mammals"). The text passes from the honey possum to the hedgehog with just a brief introductory note on insectivores.

Such flaws, however, are relatively minor. Nowak and Paradiso are to be congratulated on a fine piece of work that must have involved a massive investment of time and energy. As they are employed by the Office of Endangered Species in the Fish and Wildlife Service (Washington), they have also been able to incorporate authoritative statements on conservation aspects in the genus profiles. Since we are now entering a time when mammal species are going to become extinct with increasing frequency, unless some quite unusual measures are enforced at once, it is especially valuable to find relevant information for the entire class Mammalia within this splendid two-volume work.

R. D. Martin

R. D. Martin is professor of physical anthropology at University College, London.

The new cosmos

A third edition of Albrecht Unsöld and Bodo Baschek's *The New Cosmos* has been published by Springer, at DM88. Although the main objective of the first edition has not changed - to give the student of astronomy, the scientist who is not a specialist, and the amateur astronomer an accessible and up-to-date introduction to astronomy and astrophysics - a new part has been added, describing the findings of the latest planetary missions and discussing satellite observations.

BOOKS

SOCIOLOGY

The limits of reason

Max Weber and the Dispute over Reason and Value by Stephen P. Turner and Regis A. Factor
Routledge & Kegan Paul, £14.95
ISBN 0 7100 9889 8

The Max Weber industry grinds on. The past few years have seen the appearance of an extraordinary variety of books about Weber, ranging from elementary introductions to scholarly monographs of all sorts. Why do Weber's writings have such a continuing appeal? After all, although his work is encyclopaedic in scope, and quite stunning in terms of the range of its scholarship, many of Weber's ideas are quite firmly connected to the social and political circumstances of his time. They do not really travel all that well, it might seem, to the closing decades of the twentieth century.

In some part, it may be guessed, a resurgence of interest in Weber is an expression of a widely-held pessimism about the future prospects of the developed societies in a period of economic recession and political doubt. Socialism, in its traditional forms at least, no longer seems to offer plausible solutions to the dilemmas which confront the West, and in the East has become part of a thoroughly authoritarian political order. Max Weber, the sombre prophet of bureaucracy and expanding state power, seems more prescient than Marx, who envisaged a world set free both from economic burdens and from political oppression.

My feeling, however, is that the main relevance of Weber to issues of current concern is not to be found in these familiar themes. Rather, it lies primarily in a series of issues which he raised perhaps more acutely than anyone else, even if his own views on them are in some respects quite unpalatable. Weber saw that some basic problems of philosophy, most particularly that of the relation between "reason" and "values", are intertwined with political



Max Weber

quandaries that have become especially acute in the modern world. If, as Weber believed, there is no way of settling debates about values by rational consideration of factual evidence, then conflicts between values have to be settled by power. The main vehicle of power in the modern era is the state, and states defend differential cultural values in a "house of power" - contending with each other to protect or advance their sovereignty. In a world of competing states, the lack of any international regulatory order coincides, as it were, with the ultimate nature of power. Politics is a field of struggle between the bearers of irreconcilable values. The able political leader realizes this, and adjusts his or her conduct accordingly. The responsible politician balances commitment to values with an assessment of the realities of power.

Weber's view of modern politics, in other words, is something quite close to the world-as-seen-by-Kissinger. It is a world where the old ideas of internationalism, and most of the aspirations of liberalism and socialism alike, have to be discarded. They are equivalent to a politics of irresponsibility, where the blind pursuit of values leads to consequences potentially disastrous for everyone, no matter how pure the good faith of those who follow these values. Whatever one's opinions about such matters, it is impossible to deny their importance. Weber's writings provide a means of confronting them in a way which is both philosophically sophisticated and politically shrewd.

It is one of the merits of the book by Turner and Factor that it makes these things clear, analysing Weber's stand-point with subtlety and insight. The work is a worthwhile contribution to the pre-existing literature, not just another quick spin through well-known Weberian territory. The authors set out to accomplish three tasks. They try to identify the main features of the political context in which Weber's views were first developed, thus rescuing them from certain mistaken interpretations made by those ignorant of that context. The influence of Weber's ideas upon subsequent political theory is then traced through, showing how these ideas have been selectively appropriated within various schools of thought. Finally, the authors seek to use their overall discussion as a means of appraising the merits and the shortcomings of Weber's views. In this last regard, it must be said, what they have to say is distinctly less elaborated than their analysis of the other aspects listed above.

Weber's relationship to socialism and to liberalism, Turner and Factor point out, has to be understood against the backdrop of German political life in the late nineteenth and early twentieth centuries. Weber's emphasis upon the stark realities of power was reached in some part through his reactions to the status and claims of the various parties in post-Bismarckian Germany. The Social Democrats, self-proclaimedly inspired by Marxism, seemed to Weber hopelessly out of touch with the concrete political demands of the day. Political dominance continued to be held by conservative interests, with liberal influences only weakly represented. Weber could not align himself readily with any of these groupings, given his goal of achieving a strong, but modernized, German state. Hence, according to the authors, although some conceptions usually associated with liberalism - such as an emphasis on the importance of achieving stable parliamentary democracy - appear in Weber's writings, they are for him means rather than ends. He was not guided by generalized values of justice and liberty, but by the need,

as he saw it, to shore up the position of the German state in a threatening environment of hostile powers. I think that Weber was more ambiguous and vacillating on this issue than the authors seem to imagine, but they none the less argue their case in an informed and plausible manner.

The debates which Weber's writings provoked during his lifetime gained pace in the years immediately following his death in 1920. The Weimar period was one of almost continual political and economic crisis, coinciding with bitter intellectual controversies in the universities. As Turner and Factor point out, there occurred an unusual amount of direct confrontation between schools of philosophy and social theory which ordinarily would have ignored one another. Weber's work, particularly his ideas about philosophy and politics, played a major role in some of these critical encounters; their polemical tone gave them a provocative edge which it was difficult to ignore. The flight of German intellectuals from Germany in the 1930s helped to carry both Weber's ideas, and the discussions surrounding them, to the English-speaking world. But Weber's work was for a considerable while only poorly understood in its new milieu, and the traditions of thought in terms of which it was interpreted were different from those dominant in Germany.

Schumpeter, Morgenstern and others drew upon Weber in some key respects in their own writings, but at the same time they tried to adapt Weber's views to the novel socio-political circumstances in which they found themselves. New controversies arose concerned with Weberian themes, but they diverged rather sharply from those characteristic of German intellectual culture. Some critiques of Weber were wholly distorted. Views were attributed to him that were only remotely similar to those he actually held, and in attacking him critics unknowingly took positions that in fact closely resembled Weber's own.

More recently, Weber's work has been at the centre of fresh debates, this time originating on their home ground, Germany. The influential philosopher and social theorist Jürgen Habermas has been the most important contributor to these. According to Habermas, Weber's writings are in some respects indispensable for understanding the nature of modern political life. In particular, Weber has helped us to see how politics has become dominated by "technological" considerations. Political life has become a means to other ends; it is no longer valued in and of itself. Because of his particular philosophical stance, however, Weber tended to treat the "technological" character of modern politics as inherent in all political activity. In Habermas's view, this is fundamentally misleading. We can rationally assess differing values. Reason, not power, must be made the arbiter of the profound political perplexities which confront us in today's world. As Turner and Factor say, Weber considered that he had uncovered the limits of reason. But perhaps he had only identified the outer boundaries of a specific philosophical tradition.

As should be apparent, this is neither a matter of purely historical interest, which can be left in the hands of Weber scholars, nor is it solely an arcane concern of philosophers. It touches upon problems whose practical implications can hardly be exaggerated.

Anthony Giddens

Anthony Giddens is a fellow of King's College, Cambridge.

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BOOKS

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Curious discipline

Ethnography: principles in practice by Martin Hammett and Paul Atkinson
Tavistock, £12.00 and £5.95
ISBN 0 422 77150 3 and 77160 0

Social life is complex, ambiguous and fleeting: those who attempt to capture it are bound to have a hard time. Novellists, anthropologists and certain kinds of journalists have enriched our lives by helping us to see other social worlds almost as if we had been in them ourselves. But how does one help a novice to gain the subtlety and understanding of the effective ethnographer? When Professor Kroeber, the American anthropologist, was asked what advice he had to give to a graduate student embarking on fieldwork he apparently took the fastest ethnography off his bookshelf and said "Go forth and do likewise".

The authors of *Ethnography*, who report this anecdote, are dismayed by that cavalier approach. Rather sternly they say, "such no-advice seems to rest on the assumption that the conduct of ethnography is unproblematic and requires no expertise". They aim to provide a kind of manual for field researchers which may serve as a textbook in courses on research methods. They draw heavily on other people's field studies compiling a mass of quotations and examples to provide a check list of hints and tips for naive ethnographers.

Without the benefit of a manual such as this, one of the authors confesses that he went to see an "influential gatekeeper" about doing fieldwork in the Edinburgh medical school "dressed extremely casually" (as well as having very long hair). Silly chap: it was not a very successful interview. However, he had the sense to get a haircut and to put on a suit for the next interview and he is now a lecturer in sociology. Not unreasonably he feels that the documentation of certain rules of social etiquette will help to ease the paths of future research ingenuities. Inevitably in a book such as this, other people's blunders are the main

source for the codified advice. In the section somewhat humorously and inelegantly entitled "Interviews as participant observation", we are told of two hapless American sociologists who attempted to interview a striptease artist "clad only in the G-string she had worn on stage and with her legs on the dressing table". These less-than-able ethnographers found the experience too much for them and they became "slightly mesmerized, we had difficulty in even remembering the questions we wanted to ask let alone getting them out of our mouths in an intelligible manner". This incapacity to face a respondent in her work garment makes one wonder whether they had chosen the right research topic.

I have considerably sympathy with the author's aim of helping people to do fieldwork better. I am always a little distrustful of sociologists who write about other people's ethnography but have never discovered for themselves how very difficult it is to gather. Nevertheless, I am a little uneasy about the assumptions that underlie this book. No doubt some people do learn to swim or drive a car better after reading a manual, but it is perhaps wrong to be so sure that Professor Kroeber's alternative approach of letting people learn by experience is invalid. In my experience much of the difficulty in doing good fieldwork is related to the specific circumstances to given research contexts. It is a very rare researcher who can work equally well with people at all levels of the social structure. I remember examining two doctoral theses, one on gypsies and one on merchant bankers. While they were both good theses I could not imagine the authors being equally successful in the other's field.

It is very curious that the authors of this book do not consider the personal qualities of the putative fieldworker. They appear to assume that individual traits are irrelevant and that those who read the book carefully will necessarily become better ethnographers. This I doubt. To my mind the most important quality ethnographers need is an insatiable curiosity and, one might add, a sense of wonder. Everything about the social world which is being explored must be potentially interesting. In the same way that people can train themselves to be good listeners, so, too, can ethnographers develop their own disciplined curiosity. But with the best will in the world some people will never make good ethnographers.

R. E. PAHL

R. E. Pahl is professor of sociology at the University of Kent.

Means of control

Private Justice: towards integrated theorizing in the sociology of law by Stuart Henry
Routledge & Kegan Paul, £6.95
ISBN 0 7100 9703 4

Sociologists have long recognized the importance of both formal and informal mechanisms in the control of human behaviour. Possibly because formal means of control at the macro level are more obvious and accessible, most research has concentrated in this area — studies of formal law and legal systems, the police, and so on. Research on informal control is sparse, especially in industrial societies, and Stuart Henry breaks new ground in this book. He is concerned with the interrelationship of formal and informal (private) mechanisms of social control, using data gathered in interviews, medical disciplinary hearings in a number of business organizations and cooperatives.

The author expected to find separate and distinct systems of formal and informal control and that these, and the internal disciplinary procedures used in different organizations, would be related to the management philosophies and structures of those organizations. He expected, for example, to find that hierarchical "conventional capitalist" firms with strong managerial control would have management-imposed disciplinary systems and that co-operatives, with their egalitarian status and collective decision-making philosophy, would have systems of informal, collective justice.

These expectations were not realized. The different types of control

mechanisms. "Conventional capitalist" organizations had systems of formal, management-imposed discipline together with collective discipline involving sanctions taken against offenders by workers and their representatives. Co-operatives, despite their distinctive ideology and approach, were found to have elite executive decision-making groups similar to those found in hierarchical organizations and to use formal disciplinary, even resorting to the use of formal law, as well as informal collective methods.

Formal and informal means of social control were thus intertwined, irrespective of the type of organization involved. The author argues that the relationship between formal law and private justice is a complex one. Private justice is not "independent" but is penetrated by the formal system, via industrial relations legislation, the Advisory Conciliation and Arbitration Service and the criminal law. Formal law is similarly penetrated by private notions of what constitutes law-breaking and private notions of justice are thus interdependent and this has important implications for attempts to change society through changes in the formal law. Such change alone is unlikely to alter society because of the way in which private justice penetrates formal law. The reverse is true, also, so that: "Only by simultaneous changing both the formal and informal is it possible to change the totality".

This is a valuable book, providing as it does insights into a sensitive and under-researched area of organizational life as well as linking, in a convincing argument, the formal and informal aspects of social control.

David Podmore

Dr Podmore is lecturer in sociology at the University of York.

Labour forces

Class at Work: the design, allocation and control of jobs by Craig R. Litterer and Graeme Sallman
Batsford, £14.95 and £6.95
ISBN 0 7134 4385 5 and 4386 3

Class is "at work" in two ways. First, the rewards and deprivations derived from employment clearly cluster unequally: those with the more interesting, skilled and responsible jobs tend to have the highest pay, the most generous fringe benefits, the most comfortable and least dangerous working conditions, and the best chances of job security and promotion, whereas those whose jobs are monotonous, unskilled and without discretion have the least rewards. Secondly, the organization and control of work are an expression and reflection of class relations between capital and labour. This book is concerned with both senses of class at work (though much more with the second), and is concerned to show how they are related.

In particular the authors emphasize how the relationship between management and worker in capitalist enterprises always involves both conflict and consent. Operating within a competitive world economy management needs to control the labour force in order to produce at minimum cost; it also needs to secure its cooperation, to engage in however minimal a way its enthusiasm and willingness so that work is done efficiently and well. Among other things this necessitates legitimizing the class inequalities which arise from the very strategies used to control and cheapen labour. As a result the relations between capital and labour are always precarious, at best a temporary resolution of conflicting demands.

A great deal of material is covered in a rather short book and the introduction to the study of labour and work. After outlining the theories of working life and the nature of the capitalist world economy, the authors provide a clear account of the variety of ways in which work is controlled in capitalist enterprises. They discuss the design of jobs influenced by Taylorism, Fordism and the Quality of Working Life movement, and consider the likely impact on jobs of new technology. They conclude with an assessment of some recent theories of class and of the labour market, and the likely impact of the current recession.

Inevitably in such a short space there are some ambiguities (confusion of "group technology" and "autonomous work groups", for example), some issues are dealt with rather cryptically, and others omitted altogether. A notable omission is any discussion of the relevance of the arguments advanced here for the considerable proportion of the labour force employed in non-commercial, mostly public sector organizations. Are they also subject to the same processes of control and domination, and if so what are the mechanisms involved?

The weaknesses of British industry have often been attributed to "old-fashioned" class identities and class loyalties. Litterer and Sallman show how conflicting class interests continue to structure work and result in persistent class differences; they show too how this is inherent in a capitalist economy, though with manifestations which vary over time and space; they do not, in this book, answer the question as to why management and workers in some other capitalist societies appear as much less preoccupied with class work.

Richard K. Brown

Richard K. Brown is professor of sociology at the University of Durham.

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BOOKS

SOCIOLOGY

Growing together

The Future of Industrial Societies: convergence or continuing diversity? by Clark Kerr
Harvard University Press, £14.00
ISBN 0 674 33850 2

Twenty-four years after *Industrialism and Industrial Man* Clark Kerr has assessed how well his and his colleagues' predictions of growing convergence among industrial societies have been fulfilled. Rather surprisingly he pays little attention to the mass of critical comment on the convergence thesis which has appeared since the mid 1960s, but simply looks at the factual evidence of the experience of the industrial world.

This evidence is of two kinds. First, there are certain major events and processes, all rather widely known — Solidarity in Poland, the Hungarian market economy, the distinctiveness of Japan, German co-determination — and some of which do more than a few turns of duty as citable examples within the 126 pages of main text. Second, some useful series of statistics are presented on a number of economic indicators; but they are just presented, and a few causal inferences drawn on the strength of them, with no use at all of statistical techniques to tease out explanatory variables and test significance.

This is therefore a disappointingly slight book where one would have liked a major study. That said, one can

then assess it in its own terms as a reflective *tour d'horizon* by one of social science's grand old men; it was in fact first presented as a series of lectures in Japan.

Kerr believes that the convergence thesis has stood up fairly well when applied to the central areas of economic production and the organization of science around that production. This is because the desire for the goods and services of modern industrialism is so universal and the basic means of providing them more or less determined. He does however see certain artificial but durable constraints imposed on the extent of convergence by the rigid determination of the governing elites of the United States and the Soviet Union to insist on the purity of, respectively, a free-enterprise and a state-controlled system. He points out that more convergence is observable if we forget the two super powers and examine those states less committed to a global ideological battle; and he notes wryly that the most "mixed" systems (Sweden and Japan on one side, Hungary and Yugoslavia on the other) have been among the most successful.

Apart from super-power rivalry, Kerr sees the main limits to convergence occurring in those segments of social life concerned with beliefs, where old traditions are able to survive. Tradition is likely to persist particularly where there is no one clearly better way (for example, religious beliefs), where strong institutions are established to support it (such as the nation state and the church), and where the innate human desire for a characteristic identity is not too costly to material results.

This gives him a central hypothesis; the more a particular segment concerns the "ordinary business of life" or "existence", the more there will be convergence; the more it concerns "consciousness" or "the mind", the greater the chance of diversity surviving. This is an attractive argument, but

book do contain commentaries on these inner features, focusing particularly on the supposed contradictions and dilemmas which result. Many of these speculations will come as a surprise to feminists, who will wonder how it is possible to attract so many women to events such as peace demonstrations and abortion rallies if the movement is as fragmented and divided as is suggested. Boucher seems to confuse the fact that the women's movement is a federal organization — which inevitably generates internal debate and discussion — with the assumption that this necessarily means it is riddled with mistrust and hostility.

A second problem relates to the decision to study feminism as a social movement. This seems to mean judging its programmes, strategies and "success" in terms of the kind of criteria used to evaluate more conventional political organizations. Thus the women's movement appears to have had very few political achievements. Most of the candidates that feminists themselves would advance, cannot be considered "successful" under the definition employed. In fact, Boucher seems confused in his evaluation of the movement. He argues that feminists should adopt the centralized form of liberal feminism found in America, but acknowledges that the demands of the more radical wing are important and cannot be attained via the liberal approach.

Sometimes, feminism is portrayed as stagnant, dying or nearly dead, at others it is seen as suggestive of a new and vibrant form of politics. The whole tenor of the book implies that the women's movement is in disarray, limited in appeal, but it is also claimed that feminism has its chaos is "fruitful". Boucher says he wishes to open up a dialogue around feminism and its constituent ideas. This aim is not served by portraying the women's movement in such a confusing and potentially damaging way.

Mary Maynard

Mary Maynard is lecturer in sociology at the University of York.

The Macmillan Student Encyclopedia of Sociology has been published at £20.00 and £7.95. Its 2000 entries cover sociological terms from classic traditions and from recent trends. It is edited by Mitchell Mann.

vulnerable to two weaknesses. First, the definition of segments is not clear. For example, "the content of knowledge" is incongruously seen as that most remote from "mind and consciousness"; and he distinguishes sharply between, on the one hand, mobilization of factors of production, organization of production, patterns of work and patterns of distribution of economic rewards — and on the other, something quite different called "economic structure".

Second, he sees a sharp disjunction between the changing and converging business of ordinary economic life and the stubborn, static, diversified inheritances of beliefs. He does not examine the possibility of interaction between these, as traditional inheritances both mould and are moulded by pressures of industrial change, giving in at least some areas of society a kind of heterogeneity within homogeneity rather than a rigid separation of convergent and diversified sectors. Systems of industrial relations would be one example of where the former analysis would serve as a better guide.

The book ends with a cautious attempt to look at various options for the future, based on different expectations of economic growth. If growth recovers pace, providing scope for many people to gain from improvements in productivity, he predicts convergence on the western model of industrialism, with efficiency being given greater emphasis than equality. If growth is slow, he expects a stronger preoccupation with distribution of the limited supply of goods and services available, and therefore with equality and hence convergence on the Soviet pattern. One problem with this is its

assumption that particular combinations of emphasis on efficiency, equality and regime type come as packages, while in practice so much was determined by whether a country was occupied by British and American or Russian armies at the end of World War II. More might be learned about the internal coherence of these packages by holding some of these variables constant, that is by considering efficiency and equality trade-offs among the countries within the blocs.

He considers the possibility of no or negative growth, and argues plausibly the probability of this leading to authoritarianism (ecologists please note), but examines as the most likely outcome a pattern of very diversified growth rates among nations, with the super powers handicapping themselves because of their military commitments and with very small differences in countries' practices and institutions having major effects.

In a more highly competitive industrial world where the technology is potentially nearly identical, where physical resources are distributed in world-wide markets, and where industrialism has left much the same imprint on many societies, what once may have seemed like small differences may have big results.

Not much space is devoted to this point, though its implications for convergence and for the likely content of the resulting societies raise very major questions. Does it mean that, if countries wish to remain competitive, they will have to forego expressing their own preferences for, say, the customary retirement age or the level of marginal tax rates (to take two examples from Kerr's list of relevant issues)

in order to follow the practice of the leading nation? To some extent there is a tension between some of the items on his list of issues — for example, the comparative burdens of the welfare state and the quality of secondary education. Will this give countries some kind of chance to choose which rival characteristics they will maximize, leading perhaps to greater diversity between, say, those who opt for an educated, healthy work force with a strong social infrastructure but heavy welfare tax burdens, and those who go for a low-tax, low-quality model?

Overall, behind his carefully balanced appraisal of future prospects, one feels Kerr remains an optimist. This is perhaps best revealed by some issues that he neglects to discuss. To take a couple of examples, first, he leaves unexamined his long-held conviction that advanced economies need an educated population; he does so without any extended consideration of the likely implications for occupational structure of new technology. Second, while he quite rightly mentions the ability of workers to form independent organizations as one of the key features distinguishing liberal capitalist from socialist societies, he pays no attention to the fact that within the most advanced sectors of the US economy trade unions are currently engaged in a losing struggle for the right to exist. This might presage a convergence with the eastern model that no one finds ideologically comfortable to discuss.

Colin Crouch

Colin Crouch is reader in sociology at the London School of Economics.

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Universities

Imperial College of Science and Technology

LECTURESHIPS

Applications are invited for the following Lectureships available from 1st October 1984.

1. DEPARTMENT OF COMPUTING - Declarative Languages: Computer Architecture.

To play key role in expanding the Department's expertise in parallel architecture for declarative languages. Hardware expertise will be an important asset.

2. DEPARTMENT OF COMPUTING - Software Engineering and AI. To act as a bridge between the strong groups already in existence in the Department in each of these areas. Interest will probably relate to the application of AI/BS technology to software engineering, for example in the use of logic based tools and databases for programming support.

3. DEPARTMENT OF ELECTRICAL ENGINEERING - Man Machine Interfaces. Cognitive aspects of information systems; speech technology.

Candidates must not currently hold a permanent university appointment in the United Kingdom. Appointment will be at an appropriate point on the Lecturers scale £3,378-£18,311 including London Allowance (under review). Further particulars of these appointments from: The Personnel Secretary, Imperial College, London SW7 2BZ. (Tel: 01-599 5111, Ext. 2003) to whom applications with curriculum vitae, list of publications and names of two referees should be sent by 25th May 1984. (14635)

THE UNIVERSITY OF MANCHESTER Lecturers in Computer Science

As a result of the IT initiative, the department seeks applicants for three lectureships.

- The Formal Methods Group of Professor Cliff Jones wishes to appoint a Lecturer who is familiar with specification and verification techniques. The department has an excellent engineering group and preference will be given to someone who would pursue research in applying formal methods in the hardware area.
- The dataflow research group, led by Doctors Ould and Watson, is working on the design and implementation of unconventional computer systems. Research is currently in progress into both data-driven (dataflow) and demand-driven (reduction) architectures. Applications are especially sought from candidates with interests and experience in the application and implementation of declarative (functional and logic) programming languages.
- Applicants should have research experience and be able to teach at undergraduate and postgraduate level in microprocessor systems or networked workstations. Groups are currently involved in developing systems for text processing, speech synthesis and recognition, and the use of micro-computers in medicine.

Initial salary range for all appointments £7,190-£14,125 p.a. (Superannuation). All posts are tenable from 1st October 1984 or as soon as possible thereafter. Particulars and application forms (returnable by 15th May) from the Registrar, The University, Manchester M13 9PL. Quote ref 142/84/THES. (14627)

UNIVERSITY OF NEWCASTLE UPON TYNE

INFORMATION TECHNOLOGY LECTURESHIPS

Applications are invited for three Lectureships funded by the U.G.C. to support research and teaching in the field of Information Technology.

Two appointments will be made in the Computing Laboratory (Refs. 16 and 17) and one in the Department of Electrical and Electronic Engineering (Ref. 18). Work in the two departments is closely interrelated, particularly in the research areas indicated. The posts are available from 1st October 1984.

Candidates will be expected to be suitably qualified and to have had postgraduate experience, in industry or in a university. Preference will be given to candidates whose background is relevant to research in one or more of the following areas of interest:

Post A (Ref. 16) FORMAL METHODOLOGIES AND TOOLS

for the specification and design of large software/hardware systems.

Post B (Ref. 17) STOCHASTIC MODELLING

of the performance and/or reliability of computing systems.

Post C (Ref. 18) VLSI DESIGN

development of computer based tools for layout of integrated circuits.

Salary will be on the Lecturers' scale: £7,190-£14,125 per annum according to age, qualifications and experience.

Further particulars, quoting the post reference, may be obtained from the Senior Assistant Registrar (F.P.), The University, 6 Kensington Terrace, Newcastle upon Tyne NE1 7RU. Applications (3 copies) giving the names and addresses of three referees, should be received not later than 18th May 1984. (14701)

University of St. Andrews

Department of German

Applications are invited for

NEW BLOOD LECTURESHIP IN GERMAN

Tenable from 1st October 1984. Candidates should have a Ph.D. in German and be able to teach at undergraduate and postgraduate level. The successful candidate will be expected to pursue research in German literature and culture and to provide courses in the field. The salary will be £7,190-£14,125 p.a. plus superannuation. Applications should be sent to the University of St. Andrews, School of German, 100 George Street, St. Andrews, Fife KY16 9AL. (14628)

University of London Birkbeck College LECTURESHIP IN THE HISTORY OF LONDON

Applications are invited for the above Lectureship in the History of London. The successful candidate will be expected to teach at undergraduate and postgraduate level and to pursue research in the field. The salary will be £7,190-£14,125 p.a. plus superannuation. Applications should be sent to the University of London, Birkbeck College, 12-13 Gower Street, London WC1E 6BT. (14629)

Cranfield Royal Military College of Science

RAAC, Stevenage, Hertfordshire, provides a range of undergraduate, postgraduate and post experience courses for newly army personnel, and co-operates with the Ministry of Defence in research and development work. The College under contract from the Ministry of Defence, in anticipation of the new year, seeks the following staff:

Senior Research Officer - Nuclear Physics

An experienced graduate physicist or engineer is required to lead the research team utilising the nuclear accelerator facilities in the Accelerator Laboratory, which is currently in the final stages of construction. The successful candidate will be responsible for the design and construction of the accelerator, and for the supervision of the research team. The salary will be £7,190-£14,125 p.a. plus superannuation. Applications should be sent to the University of Cranfield, 1-2, Bedford Way, London WC1E 6BT. (14630)

Senior Research Officer - Chemistry

To administer research contracts in the chemical systems group. An interest in knowledge of explosives, the behaviour of vapour clouds or physical protection from liquids and vapours would be an advantage. Applicants should possess a higher degree in chemistry or a related subject. Salary £10,710-£14,125 p.a. Ref GE122

Teaching Assistant - Chemistry

to teach Chemistry to "A" level and first year general degree student. Responsibilities will include: lecturing and practical instruction in organic, inorganic and physical chemistry; supervision of laboratory work; and the preparation of lecture notes and laboratory manuals. The successful candidate will be expected to have a higher degree in chemistry or a related subject and to have an aptitude for teaching. Salary £7,190-£11,815 p.a. Ref GE124

Teaching Associates- Electronic/Electrical Engineering

to carry out theoretical and practical investigations for academic staff, including the design, development and modification of special equipment for research and teaching. Duties include undertaking laboratory supervision and testing of students, application of specialist laboratory equipment, and some administration of a laboratory. The vacancies are in the areas of:

- Electronic magnetic systems engineering: microwave instrumentation, measurement and CAD.
- Information Engineering: electronics and communication engineering.
- Control and Guidance: control of guidance systems.

Application forms and further details from Personnel Department, Cranfield Institute of Technology, Cranfield, Bedford MK43 0AL. Telephone Bedford (0234) 750111 ext 5257. Closing date for all posts: 18th May. (14700)

THE CITY UNIVERSITY CENTRE FOR SOFTWARE RELIABILITY IT LECTURESHIP

Applications are invited for the above post, tenable from October 1984. The Centre for Software Reliability, based in the Department of Mathematics, is a co-operative venture between industry and university. It aims to promote and participate in research directed towards the problems of reliable software. This is a new permanent post, and the successful applicant will be expected to work in the area of position and measurement of software reliability. He/she will probably have a background in probability and statistics, or software engineering. Salary will be within the range £8,376 to £18,311 per annum inclusive of London Allowance. Further details and application forms may be obtained from the Academic Registrar's Department, The City University, Northampton Square, London EC1N 4PB. Tel: 01-253 4300. Ext. 3028. Closing date 25th May 1984. (14626)

Universities continued

UNIVERSITY OF GLASGOW

Applications are invited from suitably qualified candidates for the following Lectureships tenable from 1st October, 1984. Candidates for the 'New Blood' posts must be under 35 years and persons holding permanent University appointments in the UK are ineligible for consideration.

New Blood Lectureships

DEPARTMENT Midwifery
Obstetrics & Gynaecology - Fetal Medicine. Closing date for applications: 25th May, 1984. Ref. No. 53477
Mechanical Engineering
Laser Technology and Manufacturing Systems. Closing date for applications: 7th June, 1984. Ref. No. 53477
Veterinary Medicine
Veterinary Dermatology. Closing date for applications: 18th May, 1984. Ref. No. 53227

Electronic Device Engineering. Closing date for applications: 21st May, 1984
Cell Biology Ref. No. 53247
Physiology
Human Physiology and Nutrition. Closing date for applications: 31st May, 1984. Ref. No. 53267

Statistics
Pattern Recognition/Image Processing. Closing date for applications: 14th May, 1984. Ref. No. 53237
Orthopaedic Surgery
Orthopaedic Biomechanics. Closing date for applications: 31st May, 1984. Ref. No. 53477

Chemistry
Inorganic - Transition Metal Complexes. Closing date for applications: 17th May, 1984. Ref. No. 53477
Drama
20th Century Scottish Theatre. Closing date for applications: 30th May, 1984. Ref. No. 53477

Accountancy
International Accounting and Financial Management. Closing date for applications: 8th June, 1984. Ref. No. 53477

Information Technology Lectureships

Two Lectureships for the MSc course in Optical Information Technology. Closing date for applications: 4th June, 1984. Ref. No. 53277

Salary for the above non-clinical posts will be on the Lecturers' scale (£7,190-£14,125), with placement according to age, qualifications and experience. Salary for the clinical posts will be on the scale for clinical teachers. The maximum on the Lecturers' scale is £16,440. Appropriate honorary grading will be determined by the Greater Glasgow Health Board.

Further particulars for the above posts may be obtained from the Academic Personnel Office, University of Glasgow, Glasgow G12 8QQ, where applications, giving the names and addresses of not more than three referees should be lodged by appropriate closing date.

In reply please quote appropriate reference numbers. (14702)

University of the Witwatersrand Johannesburg Department of Sociology LECTURER

Applications are invited from suitably qualified persons, returning from overseas, for a Lectureship in the Department of Sociology. The successful candidate will be expected to teach at undergraduate and postgraduate level, and to pursue research in the field of sociology or one of its specialisations. A knowledge of Afrikaans would be an additional advantage.

The Department offers courses in sociology and industrial sociology at both undergraduate and postgraduate level.

The salary will be in the range R12,047 - R24,178 per annum plus pension and medical aid. The level of appointment will be determined by the qualifications and experience of the candidate. The successful candidate will be expected to have a Ph.D. in sociology or a related subject and to have an aptitude for teaching. Salary R12,047-£14,125 p.a. Ref. No. 53477

Further particulars, quoting the post reference, may be obtained from the Senior Assistant Registrar (F.P.), The University, 6 Kensington Terrace, Newcastle upon Tyne NE1 7RU. Applications (3 copies) giving the names and addresses of three referees, should be received not later than 18th May 1984. (14701)

UNIVERSITY OF NEWCASTLE UPON TYNE "NEW BLOOD" LECTURESHIPS

Applications are invited for the following fifteen lectureships funded under the U.G.C. "New Blood" scheme. Applicants should normally be under 35 years of age. The posts are available from 1st October 1984.

Agricultural Biochemistry and Nutrition - Agricultural Biochemistry (Post Ref. 1)

The Department has a long standing commitment in the field of biochemistry and nutrition of ruminant livestock, with particular reference to microbial digestion within the rumen and its significance for the host animal. Applications for this post are invited from suitably qualified persons preferably with considerable experience in the technique of recombinant DNA technology and an interest in working in the applied field of agricultural science. Although situated in the Department of Agricultural Biochemistry and Nutrition the appointee would be expected to work closely with Professor P. T. Emmerson in the Department of Biochemistry, Faculty of Science, and would be responsible for developing a research programme directed to some aspect relevant to the nutrition of ruminant livestock.

Agricultural Engineering - Soil Machine Mechanics (Post Ref. 2)

Candidates, who should have experience in soil mechanics, will be expected to take a long term interest in the development of theoretical work in soil deformation, its verification in the laboratory and its application in engineering devices in agriculture, civil engineering and marine technology.

Archaeology - (Post Ref. 3)

This post will be in the field of Early Islamic archaeology. Applicants should be archaeologists with appropriate field-experience prepared to devote themselves to the Early Islamic period, and not necessarily only those with qualifications in the Islamic field.

Chemical Engineering - Process control and modelling (Post Ref. 4)

Candidates should have a good Honours degree in an engineering discipline and should have postgraduate experience in the relevant field. Industrial experience would be an advantage.

Civil Engineering - Transport Operations (Post Ref. 5)

The Transport Operations Research Group (TORG) under the direction of Professor P. J. Hills is expanding its activities into the field of Information Technology applied to Transport. The successful applicant will be one who has knowledge and experience of the latest techniques either in urban traffic control or in Transport operations and can identify the scope and potential for exploiting IT in transport. Besides normal postgraduate teaching commitments, the postholder will share responsibility for securing, managing and reporting on research projects whose value currently exceeds £10m. The fostering of further links between TORG and the transport industry will be particularly important.

Clinical Biochemistry and Metabolic Medicine - (Post Ref. 6)

This post will form a key part of a group developing miniaturised electrodes for in vivo and in vitro use. Previous experience of enzyme electrodes a major advantage.

Education - Mathematics Education in primary schools (Post Ref. 7)

Applications are invited from well-qualified Mathematics with substantial recent experience of Primary school teaching for a Lectureship in the University School of Education. The person appointed will join the core team of lecturers responsible for the expanding Primary PGCE, and contribute to in-service courses. He or she will also undertake research in the field of Mathematics education, and will be expected to have a Ph.D. in Mathematics, and to have an aptitude for teaching. Salary £7,190-£14,125 p.a. Ref. No. 53477

Genetics - Eukaryote molecular genetics (Post Ref. 8)

We are seeking to appoint a research scientist active in the field of eukaryote molecular genetics with experience in eukaryote gene cloning who wishes to undertake a research programme involving the use of recombinant DNA techniques. Facilities are well established in the department for prokaryote gene cloning, the molecular genetics of fungi and the cloning of higher plant cDNA.

well established in the department for prokaryote gene cloning, the molecular genetics of fungi and the cloning of higher plant cDNA.

Inorganic Chemistry - Organometallic chemistry (Post Ref. 9)

The successful candidate will be expected to be involved in teaching, with a major commitment to research in the organometallic area. Candidates should hold a Ph.D. degree and some research experience at the postdoctoral level is desirable.

Mechanical Engineering - Robotics and Production Engineering (Post Ref. 10)

Candidates should have interests and experience in Robotics and Production Engineering. The Lecturer will be expected to take part in undergraduate and postgraduate teaching and to contribute to extensive departmental research in the relevant areas. A strong commitment to industrial co-operation will be essential. Candidates should have a good Honours degree in Mechanical Engineering or a related field, with subsequent research and/or industrial experience.

Metallurgy and Engineering Materials - Engineering Ceramics (Post Ref. 11)

The duties will be to develop research in the manufacture and application of new and improved ceramic materials for engineering purposes and to develop undergraduate teaching in this and related fields. Preference will be given to candidates with industrial experience in the production, development or use of ceramics as engineering materials and with proven research ability. An interest in and knowledge of nitrogen and carbon ceramics would be an advantage.

Physics - Quantum gravity and cosmology (Post Ref. 12)

This post will be in the Department of Theoretical Physics. The successful applicant will be expected to collaborate with Professor P. C. V. Davies' research group, whose current activities include quantum aspects of gravity and their application to the early stages of the universe. Applicants should have postdoctoral research experience in at least one of the following areas: quantum gravity, gauge theories, general relativity, cosmology.

Physics - Experimental Atomic Physics (Post Ref. 13)

The Department of Atomic Physics has current research interests in charged particle collisions, photoionization of ions by VUV synchrotron radiation and laser and conventional spectroscopy. Applicants should have interests broadly in these areas. Preference will be given to those interested in studying atomic and molecular systems using synchrotron or laser radiation. The department is involved in teaching both physics and astronomy degree courses.

Politics - East Asia: Public Policy and Government in Japan (Post Ref. 14)

The successful candidate, who will be a specialist in Japanese government and politics, will be expected to undertake research and teaching in Japanese government and public policy. Preference is likely to be given to candidates with research interests in Japanese government-industry relations, additional interest in other aspects of East Asia, or comparative public policy will be an advantage.

Soil Science - (Post Ref. 15)

We are seeking a chemist, biochemist or microbiologist, preferably with research experience in soil organic matter or humic substances, to study the factors influencing carbon turnover in soils. A knowledge of one or more of the following would be an advantage: microbial biomass and activity measurements, 14C dating, spectroscopic techniques.

Salary will be on the Lecturers' scale: £7,190-£14,125 per annum according to age, qualifications and experience.

Further particulars, quoting the post reference, may be obtained from the Senior Assistant Registrar (F.P.), The University, 6 Kensington Terrace, Newcastle upon Tyne NE1 7RU. Applications (3 copies), giving the names and addresses of three referees, should be received not later than 18th May 1984. (14700)

University of London King's College London

Queen Elizabeth College
Chelsea College

TEMPORARY LECTURESHIP IN ENGLISH

Applications are invited for a Temporary Lectureship in the Department of English Studies from 1st October 1984 to 30th September 1985. The successful candidate will be expected to teach at undergraduate and postgraduate level, and to pursue research in the field of English literature. The salary will be £7,190-£14,125 p.a. plus superannuation. Applications should be sent to the University of London, King's College, 100 Brookman's Lane, London W8 7AH. (14628)

The University of Lancaster

Department of Italian
Studies

TEMPORARY LECTURESHIP

Applications are invited for a Temporary Lectureship in the Department of Italian Studies from 1st October 1984 to 30th September 1985. The successful candidate will be expected to teach at undergraduate and postgraduate level, and to pursue research in the field of Italian literature. The salary will be £7,190-£14,125 p.a. plus superannuation. Applications should be sent to the University of Lancaster, 1-2, Bedford Way, London WC1E 6BT. (14629)

The University of Sussex CHAIR OF AMERICAN STUDIES

The University wishes to appoint to the Chair of American Studies a Lecturer in American Studies. The successful candidate will be expected to teach at undergraduate and postgraduate level, and to pursue research in the field of American literature. The salary will be £7,190-£14,125 p.a. plus superannuation. Applications should be sent to the University of Sussex, Brighton BN1 9QJ. (14630)

University of London Birkbeck College LECTURER IN COMMONWEALTH HISTORY

Applications are invited for the above Lectureship in the History of the Commonwealth. The successful candidate will be expected to teach at undergraduate and postgraduate level, and to pursue research in the field of Commonwealth history. The salary will be £7,190-£14,125 p.a. plus superannuation. Applications should be sent to the University of London, Birkbeck College, 12-13 Gower Street, London WC1E 6BT. (14631)

THE UNIVERSITY OF LANCASTER

"NEW BLOOD" LECTURESHIPS

Applications are invited for the following Lectureships available from 1 October 1984 in the following Departments and fields:

- BIOLOGICAL SCIENCES (PLANT CELL PHYSIOLOGY)**
This post is intended to complement an existing strong team of plant physiologists and biochemists. The research is interdisciplinary, involving molecular biology, plant physiology and biochemistry. The research is interdisciplinary, involving molecular biology, plant physiology and biochemistry. The research is interdisciplinary, involving molecular biology, plant physiology and biochemistry.
- ENGINEERING (ENGINEERING DESIGN)**
The essential need is for a highly motivated and imaginative mind, but design experience in mechanical or structural engineering and computing skills would be welcome. The research is interdisciplinary, involving mechanical engineering, structural engineering and computing.
- ENVIRONMENTAL SCIENCES**
The Lectureship is in the field of tropospheric chemistry and it is intended that the successful candidate should develop measurement techniques for trace atmospheric species applicable at remote "background" locations. Some teaching of environmental chemistry is also anticipated. Proven research ability in atmospheric chemistry is essential, and a knowledge of meteorology would be advantageous. (REF. L044)
- OPERATIONAL RESEARCH**
The above post is intended to contribute to the intellectual and practical development of Decision Support Systems. Applicants should have an interest in the general principles of DSS, or in the use of mathematics which may be used for DSS, or in the acceptance of DSS by decision makers. (REF. L042)
- PHYSICS (PARTICLE PHYSICS)**
The person appointed will be expected to contribute to a flourishing programme of experimental elementary particle physics on the ALICE experiment at LEP or a future experiment at HERA, and, in due course, contribute in a broad way to the teaching in the Department. Candidates should have gained a Ph.D. or equivalent in the subject and further experience would be valuable. (REF. L041)
- PSYCHOLOGY AND COMPUTING**
This post will be a joint appointment in the Departments of Psychology and Computing. Applicants would normally be expected to possess a qualification in Psychology and to have interests in the psychological aspects of DSS. The appointee will be expected to take part in joint projects between the two departments, to help design, develop and teach courses at undergraduate and postgraduate levels in both departments. (REF. L046)

Candidates should be aged 35 or under and must not currently hold a permanent university appointment in the United Kingdom. Appointment will be at an appropriate point on the Lectureship scale £27,000-£41,425. Further particulars may be obtained (quoting the appropriate reference) from the Establishment Office, University House, Bailrigg, Lancaster LA1 4YW, where applications (six copies) naming three referees, should be sent. The closing dates for posts no. 2, 3, 4 and 6 is 15 May 1984; post no. 1 closes on 4 May 1984 and post no. 5 on 31 May 1984.

The University of Lancaster
Department of Classics and Archaeology
Archaeology Unit
Applications are invited for the post of

DIRECTOR OF THE LANCASHIRE ARCHAEOLOGY UNIT
which is financed by the Department of the Environment. The successful candidate will be responsible for the unit's activities, including the excavation, recording, analysis and publication of archaeological remains in the region. The salary will be in the range £27,000-£41,425.

Further information may be obtained by contacting the Unit Secretary, University House, Bailrigg, Lancaster LA1 4YW, where applications (six copies) naming three referees, should be sent. The closing date for applications is 14 May 1984.

University of Essex
Department of Chemistry
CHAIR OF CHEMISTRY
Applications are invited for a full-time post in the Department of Chemistry. The successful candidate will be responsible for the unit's activities, including the excavation, recording, analysis and publication of archaeological remains in the region. The salary will be in the range £27,000-£41,425.

Further information may be obtained by contacting the Unit Secretary, University House, Bailrigg, Lancaster LA1 4YW, where applications (six copies) naming three referees, should be sent. The closing date for applications is 14 May 1984.

University of Essex
Department of Sociology
NEW BLOOD LECTURESHIP
Applications are invited for the post of Lecturer in Sociology. The successful candidate will be responsible for the unit's activities, including the excavation, recording, analysis and publication of archaeological remains in the region. The salary will be in the range £27,000-£41,425.

Further information may be obtained by contacting the Unit Secretary, University House, Bailrigg, Lancaster LA1 4YW, where applications (six copies) naming three referees, should be sent. The closing date for applications is 14 May 1984.

University of Essex
Department of Law
TEMPORARY LECTURESHIP IN LAW
Applications are invited for a temporary Lectureship in Law. The successful candidate will be responsible for the unit's activities, including the excavation, recording, analysis and publication of archaeological remains in the region. The salary will be in the range £27,000-£41,425.

Further information may be obtained by contacting the Unit Secretary, University House, Bailrigg, Lancaster LA1 4YW, where applications (six copies) naming three referees, should be sent. The closing date for applications is 14 May 1984.

University of Essex
Department of Law
TEMPORARY LECTURESHIP IN LAW
Applications are invited for a temporary Lectureship in Law. The successful candidate will be responsible for the unit's activities, including the excavation, recording, analysis and publication of archaeological remains in the region. The salary will be in the range £27,000-£41,425.

University of London
THE LONDON SCHOOL OF ECONOMICS
AND POLITICAL SCIENCE

"New Blood" Lectureships

Applications are invited for the following "New Blood" lectureships tenable from 1st October 1984.

Department of Economics
The working of financial markets, involving work on either the domestic and/or international aspects of capital markets, taxation of financial services, liberalisation of international trade in financial services or effect of differential inflation.

Departments of Economic History and Industrial Relations
Modern Japanese Business: study of strategies followed by Japanese corporations in the twentieth century.

Department of Social Science and Administration
Social administration with special reference to European comparative social policy. Ability to work in at least one European language other than English is required.

Department of Statistical and Mathematical Sciences
Applicable mathematics - combinatorial optimisation methods in Operational Research.

Candidates should be aged under 35 and should not hold a permanent post in a UK university. The salary will be on the scale for lecturers, £17,100-£21,125 per annum plus 11.6% year London Allowance and the starting salary will be dependent upon age, qualifications and experience. Particulars of the above posts can be obtained on request of a stamped, addressed envelope, from the Administrative Officer, Room 14610, The London School of Economics, Houghton Street, London WC2A 2AE, to whom applications should be returned by 21st May 1984. (14726)

UNIVERSITY OF LONDON
GOLDSMITHS' COLLEGE
SCHOOL OF EDUCATION

HEAD OF B.E.D. COURSES

Applications are invited for the post of Head of B.E.D. Courses, tenable from September 1st, 1984. The successful applicant will be required to take responsibility for all B.E.D. courses, including the In-Service B.E.D., and to develop the new B.E.D. courses for which candidates will first be admitted in the second academic year. The main focus of this course will be on the preparation of teachers for the Primary sector of education, (Nursery, Infant and Junior), so that candidates should have extensive experience both of working in that sector and of preparing to contribute to the teaching of advanced courses with the School of Education and in the development of research in some aspect of Primary or Early Childhood Education.

Salary on scale £16,377 x 4 increments to £18,078 plus inclusive of London Allowance.

Write for further details to the Senior Assistant Registrar (Personnel), University of London Goldsmiths' College, New Cross, London SE14 6NW. Closing date for receipt of applications 18th May 1984. (14720)

University of Waikato
Hamilton, New Zealand
JUNIOR LECTURER(S), LECTURER/SENIOR LECTURER, MANAGEMENT STUDIES

Applications are invited for the following Lectureships in the Department of Management Studies:

LECTURER IN MARKETING (REF: 603/166)
To teach Marketing Management and at least two of the following specialist subjects: Marketing Research, Consumer Behaviour, Distribution, Financial Services and International Marketing. The successful candidate will have a sound research background and a good publication record and relevant business experience.

LECTURER IN STRATEGIC MANAGEMENT (REF: 604/166)
To teach Strategic Management and at least two of the following specialist subjects: Marketing Research, Consumer Behaviour, Distribution, Financial Services and International Marketing. The successful candidate will have a sound research background and a good publication record and relevant business experience.

University of Essex
Department of Law
TEMPORARY LECTURESHIP IN LAW
Applications are invited for a temporary Lectureship in Law. The successful candidate will be responsible for the unit's activities, including the excavation, recording, analysis and publication of archaeological remains in the region. The salary will be in the range £27,000-£41,425.

Further information may be obtained by contacting the Unit Secretary, University House, Bailrigg, Lancaster LA1 4YW, where applications (six copies) naming three referees, should be sent. The closing date for applications is 14 May 1984.

UNIVERSITY OF LONDON
INSTITUTE OF PSYCHIATRY
"New Blood" Lectureships

Applications are invited for the following lectureships in the Department of Psychiatry:

LECTURESHIP IN MOLECULAR BIOLOGY (Ref: 603/166)
Candidates should have experience in Molecular Biology and a strong interest in the application of molecular biology to the study of mental illness. A study of DNA polymorphisms having a family history of psychiatric illness is the main focus of this post. The successful candidate will be expected to contribute to the teaching of Molecular Biology to postgraduate students and to the research in the Department of Psychiatry.

LECTURESHIP IN MOLECULAR BIOLOGY (Ref: 603/166)
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THE TIMES HIGHER EDUCATION SUPPLEMENT 27.4.84

Universities continued

BRUNEL UNIVERSITY
Department of Chemistry

1. "New Blood" Lectureship in Inorganic Chemistry

Applications are invited for this post from candidates who research experience in inorganic chemistry and who are prepared to teach inorganic chemistry to postgraduate students. The successful candidate will be expected to contribute to the teaching of inorganic chemistry to postgraduate students and to the research in the Department of Chemistry.

2. Lectureship in Organic Chemistry
Applications are invited for this post from candidates who research experience in organic chemistry and who are prepared to teach organic chemistry to postgraduate students. The successful candidate will be expected to contribute to the teaching of organic chemistry to postgraduate students and to the research in the Department of Chemistry.

3. Lectureship in Physical Chemistry
Applications are invited for this post from candidates who research experience in physical chemistry and who are prepared to teach physical chemistry to postgraduate students. The successful candidate will be expected to contribute to the teaching of physical chemistry to postgraduate students and to the research in the Department of Chemistry.

4. Lectureship in Analytical Chemistry
Applications are invited for this post from candidates who research experience in analytical chemistry and who are prepared to teach analytical chemistry to postgraduate students. The successful candidate will be expected to contribute to the teaching of analytical chemistry to postgraduate students and to the research in the Department of Chemistry.

5. Lectureship in Environmental Chemistry
Applications are invited for this post from candidates who research experience in environmental chemistry and who are prepared to teach environmental chemistry to postgraduate students. The successful candidate will be expected to contribute to the teaching of environmental chemistry to postgraduate students and to the research in the Department of Chemistry.

6. Lectureship in Biochemistry
Applications are invited for this post from candidates who research experience in biochemistry and who are prepared to teach biochemistry to postgraduate students. The successful candidate will be expected to contribute to the teaching of biochemistry to postgraduate students and to the research in the Department of Chemistry.

7. Lectureship in Microbiology
Applications are invited for this post from candidates who research experience in microbiology and who are prepared to teach microbiology to postgraduate students. The successful candidate will be expected to contribute to the teaching of microbiology to postgraduate students and to the research in the Department of Chemistry.

8. Lectureship in Immunology
Applications are invited for this post from candidates who research experience in immunology and who are prepared to teach immunology to postgraduate students. The successful candidate will be expected to contribute to the teaching of immunology to postgraduate students and to the research in the Department of Chemistry.

9. Lectureship in Cell Biology
Applications are invited for this post from candidates who research experience in cell biology and who are prepared to teach cell biology to postgraduate students. The successful candidate will be expected to contribute to the teaching of cell biology to postgraduate students and to the research in the Department of Chemistry.

10. Lectureship in Molecular Biology
Applications are invited for this post from candidates who research experience in molecular biology and who are prepared to teach molecular biology to postgraduate students. The successful candidate will be expected to contribute to the teaching of molecular biology to postgraduate students and to the research in the Department of Chemistry.

11. Lectureship in Developmental Biology
Applications are invited for this post from candidates who research experience in developmental biology and who are prepared to teach developmental biology to postgraduate students. The successful candidate will be expected to contribute to the teaching of developmental biology to postgraduate students and to the research in the Department of Chemistry.

12. Lectureship in Plant Biology
Applications are invited for this post from candidates who research experience in plant biology and who are prepared to teach plant biology to postgraduate students. The successful candidate will be expected to contribute to the teaching of plant biology to postgraduate students and to the research in the Department of Chemistry.

13. Lectureship in Animal Biology
Applications are invited for this post from candidates who research experience in animal biology and who are prepared to teach animal biology to postgraduate students. The successful candidate will be expected to contribute to the teaching of animal biology to postgraduate students and to the research in the Department of Chemistry.

14. Lectureship in Human Biology
Applications are invited for this post from candidates who research experience in human biology and who are prepared to teach human biology to postgraduate students. The successful candidate will be expected to contribute to the teaching of human biology to postgraduate students and to the research in the Department of Chemistry.

15. Lectureship in Environmental Health
Applications are invited for this post from candidates who research experience in environmental health and who are prepared to teach environmental health to postgraduate students. The successful candidate will be expected to contribute to the teaching of environmental health to postgraduate students and to the research in the Department of Chemistry.

16. Lectureship in Occupational Health
Applications are invited for this post from candidates who research experience in occupational health and who are prepared to teach occupational health to postgraduate students. The successful candidate will be expected to contribute to the teaching of occupational health to postgraduate students and to the research in the Department of Chemistry.

17. Lectureship in Public Health
Applications are invited for this post from candidates who research experience in public health and who are prepared to teach public health to postgraduate students. The successful candidate will be expected to contribute to the teaching of public health to postgraduate students and to the research in the Department of Chemistry.

18. Lectureship in Community Health
Applications are invited for this post from candidates who research experience in community health and who are prepared to teach community health to postgraduate students. The successful candidate will be expected to contribute to the teaching of community health to postgraduate students and to the research in the Department of Chemistry.

19. Lectureship in Health Services
Applications are invited for this post from candidates who research experience in health services and who are prepared to teach health services to postgraduate students. The successful candidate will be expected to contribute to the teaching of health services to postgraduate students and to the research in the Department of Chemistry.

20. Lectureship in Health Management
Applications are invited for this post from candidates who research experience in health management and who are prepared to teach health management to postgraduate students. The successful candidate will be expected to contribute to the teaching of health management to postgraduate students and to the research in the Department of Chemistry.

21. Lectureship in Health Economics
Applications are invited for this post from candidates who research experience in health economics and who are prepared to teach health economics to postgraduate students. The successful candidate will be expected to contribute to the teaching of health economics to postgraduate students and to the research in the Department of Chemistry.

22. Lectureship in Health Law
Applications are invited for this post from candidates who research experience in health law and who are prepared to teach health law to postgraduate students. The successful candidate will be expected to contribute to the teaching of health law to postgraduate students and to the research in the Department of Chemistry.

23. Lectureship in Health Ethics
Applications are invited for this post from candidates who research experience in health ethics and who are prepared to teach health ethics to postgraduate students. The successful candidate will be expected to contribute to the teaching of health ethics to postgraduate students and to the research in the Department of Chemistry.

24. Lectureship in Health Policy
Applications are invited for this post from candidates who research experience in health policy and who are prepared to teach health policy to postgraduate students. The successful candidate will be expected to contribute to the teaching of health policy to postgraduate students and to the research in the Department of Chemistry.

25. Lectureship in Health Research
Applications are invited for this post from candidates who research experience in health research and who are prepared to teach health research to postgraduate students. The successful candidate will be expected to contribute to the teaching of health research to postgraduate students and to the research in the Department of Chemistry.

26. Lectureship in Health Education
Applications are invited for this post from candidates who research experience in health education and who are prepared to teach health education to postgraduate students. The successful candidate will be expected to contribute to the teaching of health education to postgraduate students and to the research in the Department of Chemistry.

27. Lectureship in Health Promotion
Applications are invited for this post from candidates who research experience in health promotion and who are prepared to teach health promotion to postgraduate students. The successful candidate will be expected to contribute to the teaching of health promotion to postgraduate students and to the research in the Department of Chemistry.

28. Lectureship in Health Communication
Applications are invited for this post from candidates who research experience in health communication and who are prepared to teach health communication to postgraduate students. The successful candidate will be expected to contribute to the teaching of health communication to postgraduate students and to the research in the Department of Chemistry.

29. Lectureship in Health Behaviour
Applications are invited for this post from candidates who research experience in health behaviour and who are prepared to teach health behaviour to postgraduate students. The successful candidate will be expected to contribute to the teaching of health behaviour to postgraduate students and to the research in the Department of Chemistry.

The University of Papua New Guinea
Port Moresby
Department of Mathematics

LECTURER/SENIOR LECTURER IN STATISTICS - P121007/84D

Candidates should have a postgraduate qualification in statistics and a strong interest in the application of statistics to the study of mental illness. A study of DNA polymorphisms having a family history of psychiatric illness is the main focus of this post. The successful candidate will be expected to contribute to the teaching of statistics to postgraduate students and to the research in the Department of Mathematics.

2. Lectureship in Inorganic Chemistry
Applications are invited for this post from candidates who research experience in inorganic chemistry and who are prepared to teach inorganic chemistry to postgraduate students. The successful candidate will be expected to contribute to the teaching of inorganic chemistry to postgraduate students and to the research in the Department of Chemistry.

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Universities continued

University of Queensland Australia NATIONAL RESEARCH FELLOWSHIP - ANTHROPOLOGY & SOCIOLOGY IN TRAINING AND WORK

A Postdoctoral Fellow is required to work on the above anthropological study. The study concerns the role of students in the fields of medicine, engineering, law and teaching at several Universities. The Fellow will be encouraged to undertake research within the Institute of European Studies which has its own staff and consequently research potential. The study of higher education.

Salary: A\$18,000 p.a. (under review). Appointment 1-3 years.

Further information from Professor John Western, University of Queensland, St. John's Road, St. John's, Queensland 4067. Tel: 07 377 3121. Telex: UNIVQD 4440315. Closing date: 17 May 1984.

University of Essex Department of Computer Science LECTURESHIP IN COMPUTATIONAL MODELLING OF KNOWLEDGE STRUCTURES

Applications are invited for a post in the Department of Computer Science. The successful candidate will be expected to undertake research in the modelling of knowledge structures. The post is for a period of 3 years, with a possibility of extension. The salary is £15,000 p.a. (under review). Appointment 1-3 years.

The successful candidate will be expected to undertake research in the modelling of knowledge structures. The post is for a period of 3 years, with a possibility of extension. The salary is £15,000 p.a. (under review). Appointment 1-3 years.

Applications (ten copies), including a curriculum vitae, should be sent to the Registrar, University of Essex, Wivenhoe Park, Colchester, Essex CO1 2NS. Closing date: 18 May 1984.

University of Newcastle upon Tyne Department of Classics LECTURER

Applications are invited for a Lecturer in Classics. The successful candidate will be expected to undertake research in the field of Classics. The post is for a period of 3 years, with a possibility of extension. The salary is £15,000 p.a. (under review). Appointment 1-3 years.

University of Exeter TEMPORARY LECTURESHIP IN ARABIC

Applications are invited for a temporary Lecturer in Arabic. The successful candidate will be expected to undertake research in the field of Arabic. The post is for a period of 1 year, with a possibility of extension. The salary is £15,000 p.a. (under review). Appointment 1-3 years.

University College of North Wales Coles Pryscol Gogledd Cymru LECTURER IN BANKING

Applications are invited for the above post in the College's Department of Economics. The person appointed will be expected to undertake research in the field of Banking. The post is for a period of 3 years, with a possibility of extension. The salary is £15,000 p.a. (under review). Appointment 1-3 years.

The person appointed will be encouraged to undertake research within the Institute of European Studies which has its own staff and consequently research potential. The study of higher education.

University of Dundee Department of Chemistry "NEW BLOOD" LECTURESHIP IN PHYSICAL CHEMISTRY

Applications are invited for the above post in the Department of Chemistry. The successful candidate will be expected to undertake research in the field of Physical Chemistry. The post is for a period of 3 years, with a possibility of extension. The salary is £15,000 p.a. (under review). Appointment 1-3 years.

The successful candidate will be expected to undertake research in the field of Physical Chemistry. The post is for a period of 3 years, with a possibility of extension. The salary is £15,000 p.a. (under review). Appointment 1-3 years.

Applications (ten copies), including a curriculum vitae, should be sent to the Registrar, University of Dundee, Dundee DD1 1HN. Closing date: 18 May 1984.

University of Exeter TEMPORARY LECTURER IN DESIGN MAKING IN HIGHER EDUCATION

Applications are invited for a temporary Lecturer in Design Making in Higher Education. The successful candidate will be expected to undertake research in the field of Design Making. The post is for a period of 1 year, with a possibility of extension. The salary is £15,000 p.a. (under review). Appointment 1-3 years.

University of Exeter TEMPORARY LECTURESHIP IN ARABIC

Applications are invited for a temporary Lecturer in Arabic. The successful candidate will be expected to undertake research in the field of Arabic. The post is for a period of 1 year, with a possibility of extension. The salary is £15,000 p.a. (under review). Appointment 1-3 years.

The University of Sheffield Department of Electronic & Electrical Engineering TWO LECTURESHIPS IN ELECTRONICS

The Department is seeking to appoint two new lecturers in Electronics. The successful candidates will be expected to undertake research in the field of Electronics. The posts are for a period of 3 years, with a possibility of extension. The salary is £15,000 p.a. (under review). Appointment 1-3 years.

University of Dundee Department of Chemistry "NEW BLOOD" LECTURESHIP IN PHYSICAL CHEMISTRY

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Durham University Business School Applications are invited for the post of

Applications are invited for the post of Lecturer in Quantitative Methods and Marketing. The successful candidate will be expected to undertake research in the field of Quantitative Methods and Marketing. The post is for a period of 3 years, with a possibility of extension. The salary is £15,000 p.a. (under review). Appointment 1-3 years.

University of Dundee Department of Chemistry "NEW BLOOD" LECTURESHIP IN PHYSICAL CHEMISTRY

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University of Newcastle upon Tyne ADMINISTRATIVE ASSISTANT

Applications are invited for the post of Administrative Assistant. The successful candidate will be expected to undertake administrative work. The post is for a period of 3 years, with a possibility of extension. The salary is £15,000 p.a. (under review). Appointment 1-3 years.

University of Dundee Department of Chemistry "NEW BLOOD" LECTURESHIP IN PHYSICAL CHEMISTRY

Applications are invited for the above post in the Department of Chemistry. The successful candidate will be expected to undertake research in the field of Physical Chemistry. The post is for a period of 3 years, with a possibility of extension. The salary is £15,000 p.a. (under review). Appointment 1-3 years.

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University of Lancaster School of Education NEW BLOOD LECTURESHIP IN 16-19'S EDUCATION

Applications are invited for the above post in the School of Education. The successful candidate will be expected to undertake research in the field of 16-19's Education. The post is for a period of 3 years, with a possibility of extension. The salary is £15,000 p.a. (under review). Appointment 1-3 years.

University of Dundee Department of Chemistry "NEW BLOOD" LECTURESHIP IN PHYSICAL CHEMISTRY

Applications are invited for the above post in the Department of Chemistry. The successful candidate will be expected to undertake research in the field of Physical Chemistry. The post is for a period of 3 years, with a possibility of extension. The salary is £15,000 p.a. (under review). Appointment 1-3 years.

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University of Exeter TEMPORARY LECTURER IN DESIGN MAKING IN HIGHER EDUCATION

Applications are invited for a temporary Lecturer in Design Making in Higher Education. The successful candidate will be expected to undertake research in the field of Design Making. The post is for a period of 1 year, with a possibility of extension. The salary is £15,000 p.a. (under review). Appointment 1-3 years.

University of Exeter TEMPORARY LECTURESHIP IN ARABIC

Applications are invited for a temporary Lecturer in Arabic. The successful candidate will be expected to undertake research in the field of Arabic. The post is for a period of 1 year, with a possibility of extension. The salary is £15,000 p.a. (under review). Appointment 1-3 years.

The University of Sheffield Department of Philosophy LECTURESHIP

Applications are invited for the above post in the Department of Philosophy. The successful candidate will be expected to undertake research in the field of Philosophy. The post is for a period of 3 years, with a possibility of extension. The salary is £15,000 p.a. (under review). Appointment 1-3 years.

University of Dundee Department of Chemistry "NEW BLOOD" LECTURESHIP IN PHYSICAL CHEMISTRY

Applications are invited for the above post in the Department of Chemistry. The successful candidate will be expected to undertake research in the field of Physical Chemistry. The post is for a period of 3 years, with a possibility of extension. The salary is £15,000 p.a. (under review). Appointment 1-3 years.

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The University of Lancaster Department of Visual Arts FELLOWSHIP IN PAINTING AND DRAWING

Applications are invited for the above post in the Department of Visual Arts. The successful candidate will be expected to undertake research in the field of Painting and Drawing. The post is for a period of 3 years, with a possibility of extension. The salary is £15,000 p.a. (under review). Appointment 1-3 years.

University of Dundee Department of Chemistry "NEW BLOOD" LECTURESHIP IN PHYSICAL CHEMISTRY

Applications are invited for the above post in the Department of Chemistry. The successful candidate will be expected to undertake research in the field of Physical Chemistry. The post is for a period of 3 years, with a possibility of extension. The salary is £15,000 p.a. (under review). Appointment 1-3 years.

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University of Oxford Keeble College RSR JUNIOR RESEARCH FELLOWSHIP

Applications are invited for the above post in Keeble College. The successful candidate will be expected to undertake research in the field of RSR Junior Research Fellowship. The post is for a period of 3 years, with a possibility of extension. The salary is £15,000 p.a. (under review). Appointment 1-3 years.

University of Dundee Department of Chemistry "NEW BLOOD" LECTURESHIP IN PHYSICAL CHEMISTRY

Applications are invited for the above post in the Department of Chemistry. The successful candidate will be expected to undertake research in the field of Physical Chemistry. The post is for a period of 3 years, with a possibility of extension. The salary is £15,000 p.a. (under review). Appointment 1-3 years.

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Manchester Polytechnic

HOLLINGS FACULTY HEAD OF DEPARTMENT (Grade IV)

Head of Food Manufacture and Distribution, for BTEC Food Technology, Trading Standards etc. and a planned degree in Food Manufacture. Applicants must have appropriate teaching/industrial and/or research experience. (Salary: £14,148-£15,849). Ref: HO/135

LECTURER IN CLOTHING PATTERN CONSTRUCTION/GRADING

In Department of Clothing Design & Technology. Emphasis is on womenswear and recent industrial experience is essential. Ref: HQ/136

ART AND DESIGN PRINCIPAL LECTURERS (3 posts)

1. In Fine Prints with responsibility for fine print element of BA(Hons) and MA (Department of Fine Art). Ref: A/394
2. In Constructed Textiles for constructed textiles in chief study area of Printed and Woven Textiles (Department of Textiles/Fashion). Ref: A/393
3. In Interior Design to lead and develop this area in BA(Hons) and MA course in 3-D Design (Department of Three-Dimensional Design). Ref: A/395

COMMUNITY STUDIES LECTURER in INFORMATION TECHNOLOGY

for IT developments in Library & Information Studies, e.g. data base systems and communication, systems analysis on BA(Hons) course. Ref: CS/376

PRINCIPAL LECTURER in SCIENCES EDUCATION

Teacher Education - preferably graduates in physical science with recent school experience for leadership of this area. Ref: CS/376

LECTURER in PSYCHOLOGY (Temporary 1 year)

General teaching on BA(Hons) Psychology but interest in statistics, computing or applied psychology an advantage. Ref: CS/377

DEPARTMENT OF LAW LECTURER in LAW

to assist with Law Society Finals courses. Ref: L/33

MANAGEMENT AND BUSINESS LECTURERS in BUSINESS & INFORMATION TECHNOLOGY (2 posts)

for IT applicants to business and financial systems. Ref: M/212

LECTURER in RETAIL MARKETING for newly-approved BA (Marketing). Ref: M/213

LECTURER in ECONOMICS (Temporary 2 year appointment) for work on BA(Economics) and related courses. Ref: M/214

TECHNOLOGY PRINCIPAL LECTURER in COMPUTING/INFORMATION SYSTEMS

to lead academic development and research in this area; industrial/commercial/teaching experience desirable. Ref: T/671

LECTURERS in INFORMATION TECHNOLOGY (COMPUTING/INFORMATION SYSTEMS/PHYSICS/MATHEMATICS) (4 posts)

for areas of Networks and Distributed Systems, Systems Design Architecture etc.; Image Processing, Computer Graphics, Optoelectronics, Operation Research Statistics. Ref: T/672

LECTURER in MANUFACTURING/DESIGN ENGINEERING

graduate engineers with industrial experience. CAD/CAM an advantage. Ref: T/673

LECTURERS in BIOLOGICAL SCIENCES (2 posts)

to advance research and teaching in Biotechnology and Biomedical/Clinical Sciences. Ref: T/674

PRINCIPAL LECTURER in ELECTRONIC ENGINEERING

for undergraduate and research work with interest in areas such as Computer networks, Digital Signals Processing, Control Engineering, CAD of Electronic circuits. Ref: T/675

Salary ranges:
Principal Lecturer: £12,519-£13,938 Bar £16,744
Lecturer (UJ): £7,215-£11,688

For an application form (returnable by Monday 14th May, 1984) and further details, send a stamped addressed envelope quoting the appropriate reference number to: The Secretary, Manchester Polytechnic, All Saints, Manchester M16 6BH.

ASSISTANT DIRECTOR (EXTERNAL RELATIONS)

ASSISTANT DIRECTOR (RESOURCES)

Applications are invited for the above posts from academically and professionally qualified candidates. The Polytechnic Council would also be pleased to hear of suitable candidates from third parties.

Salary Scale: £20,700 per annum.

Further particulars and application forms may be obtained from the Staff Officer, Trent Polytechnic, Burton Street, Nottingham NG1 4BU. (Telephone 0802 418248 Ext 2059) Closing date for receipt of applications 11 May 1984.

TRENT POLYTECHNIC

Nottinghamshire County Council

Colleges of Further Education continued

Applying for a job in Gwent?

The National Association of Teachers in Further and Higher Education is in dispute with Gwent County Council over conditions of service.

Anyone considering applying for a lecturing job in Gwent is asked to contact:

Jim Munery
or
Paula Lanning
NATFHE
Hamilton House
Mableton Place
London WC1H 9BH
(14721)

School of Design Portsmouth

LECTURERS IN TECHNICAL ILLUSTRATION

2 more Lecturers are required to join the team teaching on the BTEC Options and Higher Diploma Courses.

Applicants will preferably have a broad ranging attitude to objective illustration, an interest in video/computer graphics and some teaching experience.

Application form and further details The Registrar, Portsmouth College of Education, 100, Further Education, Winston Churchill Avenue, Portsmouth PO1 2DU, to be returned within 14 days of the appearance of this advertisement.

Research & Studentships

University College of Swansea

Research Studentship

Applications are invited for a NERC studentship (Case award) in the Department of Geography for a Field Investigation and meteorological monitoring of the generation of acid rain, awarded by Dr. R. P. D. Walsh (Swansea) and Dr. P. G. Whitham (Institute of Hydrology). Applicants should possess or expect to receive shortly a good honours degree in geography, environmental sciences, meteorology, computer science or any related subject. The successful candidate will be based in Swansea and will carry out fieldwork on the Towy river around the Llyn Brenhin reservoir in Central Wales. A considerable time will also be spent at the Institute of Hydrology in Wallingford. The studentship will be for three years from October 1, 1984 and the value will be £10,000 per annum. The person appointed will be a full member of the college staff and will be responsible for the supervision of the studentship. Further details may be obtained from Dr. R. P. D. Walsh of the Department of Geography (0792 205678 Ext. 4150) to whom applications should be sent by Friday, May 11, 1984.

UNIVERSITY OF EAST ANGLIA

School of Law

POSTGRADUATE RESEARCH STUDENTSHIPS

Applications are invited for research studentships in the School of Law to pursue research leading to an LL.M or PhD. The studentships will cover fees and carry a maintenance allowance corresponding to the current rate for D.E.S. and Research Council awards.

Further particulars together with forms of application can be obtained from the Senior Administrative Assistant, School of Law, University of East Anglia, Norwich, NR4 7TA to whom applications should be submitted by not later than 12th May, 1984.

University of Durham

Department of Applied Physics and Electronics

POSTDOCTORAL RESEARCH ASSISTANTSHIP IN SEMICONDUCTOR THEORY

Applications are invited for a postdoctoral research assistantship in semiconductor theory under the direction of Dr. R. A. Abram. The position involves theoretical work on semiconductor devices and is an excellent opportunity for those with a strong interest in this field. Further details and application forms may be obtained from the Registrar, University of Durham, Leazes Road, Durham, DH1 1TA, by 14th May, 1984.

Accommodation to Let

PROFESSIONAL non-smoking female over 25 requires furnished flat in central London. Salary £15,000-£20,000. Waterlo/Holborn/Vic. Tel: 01-253 8888.

NATIONAL INSTITUTE OF ADULT CONTINUING EDUCATION (ENGLAND AND WALES)

RESEARCH ASSOCIATES (2)

From 1st July to 31st December 1984, to collect, analyse and summarise written evidence about adult education and the unemployed. Some visits to schemes will be necessary. The successful candidates, who will have a record of integrity, hard work and research experience, will work from home but will have access to a major institutional library.

Salary: £4,000 for the six months period, plus National Insurance. Applications by letter (no forms) with names and addresses of two referees to:

Associate Director (Research), NIACE, 19B De Montfort Street, Leicester LE1 7GE.

Closing date 8th May; interviews 22nd May. (14830)

MANCHESTER POLYTECHNIC

John Dalton Faculty of Technology

RESEARCH ASSISTANT

A STUDY OF HEAT TREATMENT PROCESSES

The work will examine the metallurgical and fluid flow problems concerned in the development of an improved method for the surface heat treatment of metals. At the successful conclusion of the work an improved method will be available to industry which will substantially reduce the costs of surface heat treatment during component manufacture. This project is being undertaken by the Department of Metallurgy and the Department of Mechanical Production and Chemical Engineering. Applicants should have or expect to obtain a good degree (or higher degree) in a relevant area.

Salary Scale £5,123-£8,083 per annum.

For further information and an application form, returnable by 14 May 1984, send a self-addressed envelope marked '7987' to the Secretary, Manchester Polytechnic, All Saints, Manchester M14 6BS.

The University of Leeds

Department of Inorganic and Structural Chemistry

THREE SERC CASE STUDENTSHIPS

Three SERC Case studentships are available for three years in the Non-Aqueous Solutions Research Group for the following projects:

1. Redox phenomena in ammonium mixtures - a liquid for low temperature battery systems (chloride, technical).
2. Use of liquid ammonia in the separation of precious metals (Johnson Matthey).
3. Application of mixed solvents containing sulphur dioxide to the solution of precious metals (BP).

Applicants, who must hold or expect to obtain a 1 or 2 Honours in Chemistry or related subject, should submit their applications to the Department of Inorganic and Structural Chemistry, The University of Leeds, Leeds LS2 9JT. Tel: Leeds 431751. Ext. 6008 or 4111.

Kent County Council - Education Committee

North West Kent College of Technology

Applications are invited for the post of Principal, to be filled by September 1984. The successful candidate will be responsible for the overall management of the college and will be expected to lead the staff in the development of the college's educational and financial objectives.

University College Cardiff

Department of Physics

POSTDOCTORAL RESEARCH ASSISTANT

Applications are invited for a postdoctoral research assistantship in the Department of Physics. The successful candidate will be responsible for the supervision of the studentship and will be expected to lead the staff in the development of the college's educational and financial objectives.

HEAD OF DEPARTMENT OF MECHANICAL TECHNOLOGY (re-advertisement)

This Grade IV Department is primarily involved in the mechanical engineering of machinery and equipment. The person appointed will be responsible for the overall management of the department and will be expected to lead the staff in the development of the department's educational and financial objectives.

University of Warwick

RESEARCH ASSOCIATE IN THE INDUSTRIAL RELATIONS RESEARCH UNIT

Applications are invited for a research associate in the Industrial Relations Research Unit. The successful candidate will be responsible for the supervision of the studentship and will be expected to lead the staff in the development of the unit's educational and financial objectives.

HEAD OF DEPARTMENT OF AUTOMOBILE AND PRODUCTION ENGINEERING (GRADE IV)

This post will require vigorous leadership and a strong interest in the development of the department's educational and financial objectives. The person appointed will be responsible for the overall management of the department and will be expected to lead the staff in the development of the department's educational and financial objectives.

University of Warwick

RESEARCH ASSOCIATE IN THE INDUSTRIAL RELATIONS RESEARCH UNIT

Applications are invited for a research associate in the Industrial Relations Research Unit. The successful candidate will be responsible for the supervision of the studentship and will be expected to lead the staff in the development of the unit's educational and financial objectives.

THE TIMES HIGHER EDUCATION SUPPLEMENT

City of Salford

CITY OF SALFORD

HEAD OF DEPARTMENT OF CONSTRUCTION AND SURVEYING (GRADE V/VI)

Required from 1 September, 1984. The Department offers a wide range of courses at craft, technical and professional level. Candidates must be graduates with professional qualifications, have had appropriate professional experience and be able to provide management leadership in a large, multi-disciplinary department.

Salary in accordance with Burnham FE scales for HOD Grade VI viz:

£15,390-£17,091 or £16,632-£18,327 under review

Further details and application forms available from the Principal, Salford College of Technology, Frederick Street, Salford, M6 6PU. Tel: 061-736 6541. Completed forms to be returned by 11 May, 1984.



Miscellaneous

Institute of Advanced Nursing Education

Principal Advisory Tutor in Management Studies

This is a newly created post and we are seeking a suitable person to become tutor, advisor and co-ordinator for courses and workshops in management studies. Applicants should have a degree in management studies, a teaching qualification and extensive management experience is essential. It will be an advantage to be a nurse.

The post is based at Rcn London headquarters, the salary scale is £12,519 to £13,938 per annum (annual review of salary scale pending) plus £1,250 p.a. London weighting allowance, and there is a contributory pension scheme.

Further details and an application form may be obtained from the Principal Personnel Officer, The Royal College of Nursing, 20 Cavendish Square, London W1M 0AB. Tel: 01-409 3333. Closing date for return of forms: 26th May 1984.

Overseas

Professor & Head

for the

Department of Geography

UNIVERSITY OF ZULULAND

The Faculty of Arts at the University of Zululand in Empangeni, Republic of South Africa, seeks a suitably qualified person for the above new three year contract post.

This post is open to members of both sexes regardless of religion, colour, race or national origin and applicants must possess at least a doctoral degree in Physical or Human Geography plus, ideally, any of the following courses taken as a 2nd Major: Geography, Hydrology, Physics, Botany or Statistics. An interest in Geomorphology and Climatology is also desirable.

A salary in the range R25,882-R33,885 is offered plus an annual service bonus of 93% of one month's salary. Benefits will include generous relocation assistance, mortgage subsidy, study aid for dependant children attending University, pension/group insurance scheme etc.

Application forms and further information are obtainable from The Secretary, SA Universities Office, 2nd Floor, Chichester House, 278 High Holborn, London WC1V 7HE, quoting ref: 1984 clearly on the envelope. Interviews will be conducted in the UK soon.

THE TIMES HIGHER EDUCATION SUPPLEMENT

Librarians

UNIVERSITY OF DUBLIN

Trinity College

LIBRARIAN

Applications are invited for appointment to this senior administrative post, vacant following the death of Mr Peter Brown. The successful applicant, in addition to professional and managerial responsibilities for the provision and operation of all library services, will have the opportunity to play a major role in the wider business of the University and of the College. Emoluments are related to the Professional Scale but include recognition of special responsibilities.

Further particulars may be obtained from:

G. H. H. Giltrap
Secretary to the College
Trinity College
Dublin 2

Tel: 772941, Ext. 1722/1123

to whom formal application may be made, preferably not later than 31st May, 1984.

Overseas continued

UNIVERSITY OF CAPE TOWN

Vacant Academic Posts

SENIOR LECTURER IN GEOGRAPHY

Applications are invited for the above post vacant from 1 September 1984. Appointment will be in either Physical or Human Geography and should be registered occupational therapists and must have had five years clinical experience and some responsibility for the supervision of students on clinical practice. Clinical experience in Orthopaedics, Rheumatology and adult Neurology, together with the relevant spectrum of treatment techniques is required.

The closing date for applications is 22 June 1984.

LECTURER IN OCCUPATIONAL THERAPY

Applications are invited for the above post vacant from 1 January 1985, although an earlier starting date may be negotiated. Candidates should be registered occupational therapists and must have had five years clinical experience and some responsibility for the supervision of students on clinical practice. Clinical experience in Orthopaedics, Rheumatology and adult Neurology, together with the relevant spectrum of treatment techniques is required.

Appointment will be made under the Joint Agreement between the University of Cape Town and the Cape Provincial Administration. Applicants should state if registered with the SA Medical and Dental Council.

The closing date for applications is 8 June 1984.

General

Appointment will be made according to qualifications and experience in the salary ranges:

Senior Lecturer: R16 557 x 838-824 045 per annum

Lecturer: R12 657 x 780-16 557 x 636-122 173 per annum plus a pensionable allowance of 12% of the basic salary with an annual service bonus of nearly one month's salary and attractive staff benefits.

Applicants should submit a curriculum vitae, stating which post is being applied for, to the Registrar (Attention: Appointments Office), Department E/436, University of Cape Town, Private Bag, Rondebosch, 7700, South Africa. Further information may be obtained from the Registrar or the Secretary, SA Universities Office, Chichester House, 278 High Holborn, London WC1V 7HE.

The University's policy is not to discriminate on the grounds of sex, race or religion.

Further information on the implementation of this policy is obtainable on request.

THE EUROPEAN UNIVERSITY INSTITUTE

Invites applications for the position of an

ASSOCIATE PROFESSOR (A5)

In the Law Department with effect from 1st September, 1985 or as soon as possible thereafter. Preference will be given to candidates with experience and current research interests in the field of Community Law, preferably in combination with private, commercial or economic law.

Contracts are for three years renewable. Further particulars are available from:

The Academic Service
European University Institute
Basil Falcioni - 150016 S
Dottorato di Ricerca (France)
Italy

Deadline for applications: 15th June, 1984. (14711)

PLEASE MENTION THE T.H.E.S. when replying to advertisements

Technical Education Post

Seychelles Polytechnic

provides vocational education related to the economic needs of the Republic, for students who will have had a secondary education within the National Youth Service and at the Seychelles College. Applications are invited from suitably qualified candidates for the post of

Head of Department of Mathematics and Science

Duties: The successful candidate will be required to develop courses in mathematics and science and to teach mathematics as required; to develop assessment techniques; to order textbooks and equipment; to participate in staff and student selection.

Qualifications: Must be UK citizens with a British educational background, preferably aged 30-45; Honours Degree in Mathematics or a Science subject; PGCE or equivalent; substantial FE teaching and administrative experience at a senior level. Language of instruction is English but knowledge of French an advantage.

Salary: A basic salary paid locally by the Government of Seychelles on a scale commencing at ca £7,600 plus a tax free supplement paid by the British Government under its aid programme on a scale commencing at ca £7,700 (single rate) or £10,700 (married rate).

Contract: The contract will be with the Government of Seychelles for an initial tour of two years, preferably starting as soon as possible but by September 1984 latest.

Closing Date for Applications: 18 May 1984.

Reference: 84 K 18 TH

For further details and an application form, please write, quoting the post reference number to:

Overseas Educational Appointments Department, The British Council, 90-91 Tottenham Court Road, London W1P 0DT

Colleges of Art continued

Rochdale College of Art

Applications are invited for the post of

VISITING PROFESSOR IN THE SCHOOL OF METALWORK AND JEWELLERY

Applicants should be practising artists with a sound knowledge of the relevant industries, nationally and internationally. Practitioners in the general field of applied arts would also be considered.

The terms of appointment and number of days per week and to association, although a 5-day per week appointment during term time is envisaged.

Further details about the appointment can be obtained from the Assistant Registrar (Personnel), Royal College of Art, Kensington, London SW7 2BU.

REMINDER

Copy for Classified Advertisements in the

THES

should arrive not later than 10am

Monday

preceding publication

The Times Higher Education Supplement

Special Book Numbers

- | | | |
|-----|----|-------------|
| May | 4 | English |
| | 11 | Chemistry |
| | 18 | Philosophy |
| | 23 | Engineering |

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|------|---|---------------|
| June | 1 | Law |
| | 8 | Psychology(I) |

- | | | |
|------|----|----------------|
| Sept | 28 | Education (II) |
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| Oct | 5 | Economics (II) |
| | 12 | Environmental Sciences (II) |
| | 19 | Sociology (II) |
| | 26 | Maths & Physics (II) |

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| Nov | 2 | History (II) |
| | 9 | Psychology (II) |
| | 16 | Politics |
| | 23 | Biological Sciences (II) |

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| Dec | 7 | Computer Science |
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